

## CWU Table Item #: 0880 ( 2 columns )

## SEQUENCE LISTING

## (1) GENERAL INFORMATION:

(iii) NUMBER OF SEQUENCES: 72

## (2) INFORMATION FOR SEQ ID NO:1:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 13473 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

## (ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 1059..2489

## (ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 2575..4107

## (ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 4113..4445

## (ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 4609..5487

## (ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 5697..8654

## (ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 9874..10962

## (ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 11159..12658

## (ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 12665..13447

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

CCCGTGCCCC TAAAGGCCGC CGAGAAAGCT AAGTCCAAAT GTGACGTCGG AGGTCTCGAC 60  
ATGGTCGCCA ACCCTCCAAA TGCTACCCGC CGGCCACGC AACGCGGGCT TTTATAAAGA 120  
TGGCGCGCGA GACAATAACA CTTACTCATC CGCGTACGCG TTTATTATTG TCAATATTTG 180  
TGTGGTTATT ATTACTGCTA CCGCCCTTGT TTCTGCAAGG CCCTCGCCGC GGCCAGGCC 240  
ACTATTCCGG CAGCGGCCGC CGACGCGGCG AGCGTCGCG CTAACGTCGG CGCCGCGGGG 300  
AGCGGGGTTT CTTGCACTTA AATAGACTCC CGAGAAAAA TTTTGGCTGC CGTTCGCCAT 360  
CATCCGAGTC GGAAACACAG TATGCGGCCG AGTTAGGTTT TACTTTTAAA AACTTTACCG 420  
TGCTGTACGG CCAGGGCGTT CTCAGGCTCG AAGGGGCAAG AGTTGTCCAG ACTGATGGGT 480  
GACTCAGAGA CAGCGTTGTC TTGCTCCGT TTACCAAAAA TATTTCCTACT CCTCTCTCAA 540  
AATTTTACC TCCGGTTTCG GTAATTAGGA AAGTTTGTGG CGCAGGGAGG TTTAAAGCTG 600  
CCATGCATAT GTCACGGGTA CCCAGCACCC ACAAATGGAA CTCTTTTTCG GCATACGGC 660

*Re-clean-up*

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CAGATGACAA ATGGTAAAC CCTGCGTCCA AGCCGCTCCA CTCGGGACTT ACTCCAGGCG	720
GGTCGCCCCC CTCACCGAAC CGAATCACGG GTCTGCACAT CCTGGGAAGG GAAACAGCT	780
CCCCGGAAC TTCGTACAGA GATGCCGGGC GCACGATTAC CGATAATGTA CTCGGACGAT	840
CGTAACTCGC CATAGTTTTC ACTGCGTGAA CCAATTCITT CCATCCAGAA TCCGAGAGCT	900
CAAATCTAGA ATTAGGTAGT TTGTAGTGGC AATCGACCGC AGAACTATA GTCACITTTA	960
CAGGCGCCAT CGCCGCTCAG ACTCCACCCC GCTATGATGT CAGAAATATA ACGCTCTTAT	1020
TCTAGCAGAG TCAGGCCAAT ATATACAGCT TAGAGAAG ATG CGG TTT CGG CGC	1073
Met Arg Phe Arg Arg	
1 5	
ATC TGT TCA CGC TCT AGG GCA GAA AAA CGA AGA AGA ACA ACC GAG AAT	1121
Ile Cys Ser Arg Ser Arg Ala Glu Lys Arg Arg Arg Thr Thr Glu Asn	
10 15 20	
CCG CTT ACC TCA AAA CGC GTT TGC GTA TTG GAT AGT TTC TCA CGG ACA	1169
Pro Leu Thr Ser Lys Arg Val Cys Val Leu Asp Ser Phe Ser Arg Thr	
25 30 35	
ATG TCA TTG CGC CCC TAT GCA GAA ATT TTG CCG ACC GCG GAA GGC GTC	1217
Met Ser Leu Arg Pro Tyr Ala Glu Ile Leu Pro Thr Ala Glu Gly Val	
40 45 50	
GAG CGC CTC GCC GAA CTT GTT AGT GTG ACA ATG ACA GAA CGC GCG GAA	1265
Glu Arg Leu Ala Glu Leu Val Ser Val Thr Met Thr Glu Arg Ala Glu	
55 60 65	
CCT GTG ACA GAG AAT ACA GCT GTA AAC AGT ATC CCC CCG GCT AAC GAG	1313
Pro Val Thr Glu Asn Thr Ala Val Asn Ser Ile Pro Pro Ala Asn Glu	
70 75 80 85	
AAC GGG CAG AAC TTC GCA TAT GCA GGC GAT GGG CCC TCG ACT ACT GAA	1361
Asn Gly Gln Asn Phe Ala Tyr Ala Gly Asp Gly Pro Ser Thr Thr Glu	
90 95 100	
AAA GTT GAC GGC TCG CAT ACA GAC TTC GAT GAA GCA TCG AGC GAC TAC	1409
Lys Val Asp Gly Ser His Thr Asp Phe Asp Glu Ala Ser Ser Asp Tyr	
105 110 115	
GCC GGC CCT GTC CCG CTC GCG CAA ACT AGA TTG AAG CAT TCG GAT GAA	1457
Ala Gly Pro Val Pro Leu Ala Gln Thr Arg Leu Lys His Ser Asp Glu	
120 125 130	
TTT CTT CAG CAC TTC CGA GTT TTA GAC GAT TTG GTG GAG GGG GCT TAC	1505
Phe Leu Gln His Phe Arg Val Leu Asp Asp Leu Val Glu Gly Ala Tyr	
135 140 145	
GGG TTT ATC TGC GGC GTC CGT CGC TAC ACC GAG GAA GAG CAA CGT CGA	1553
Gly Phe Ile Cys Gly Val Arg Arg Tyr Thr Glu Glu Glu Gln Arg Arg	
150 155 160 165	
AGA GGG GTT AAC AGT ACT AAC CAG GGG AAA TCA AAA TGT AAG CGC CTG	1601
Arg Gly Val Asn Ser Thr Asn Gln Gly Lys Ser Lys Cys Lys Arg Leu	
170 175 180	
ATA GCT AAA TAT GTG AAA AAT GGA ACA AGG GCG GCC TCT CAG CTG GAA	1649
Ile Ala Lys Tyr Val Lys Asn Gly Thr Arg Ala Ala Ser Gln Leu Glu	
185 190 195	
AAT GAA ATT TTG GTT CTC GGG CGC CTA AAT CAC GAG AAT GTT CTC AAG	1697
Asn Glu Ile Leu Val Leu Gly Arg Leu Asn His Glu Asn Val Leu Lys	
200 205 210	
ATC CAG GAA ATC CTT CGG TAC CCG GAT AAT ACG TAC ATG TTA ACG CAG	1745
Ile Gln Glu Ile Leu Arg Tyr Pro Asp Asn Thr Tyr Met Leu Thr Gln	
215 220 225	
AGG TAT CAG TTC GAC TTG TAC AGC TAC ATG TAC GAT GAA GCG TTC GAC	1793
Arg Tyr Gln Phe Asp Leu Tyr Ser Tyr Met Tyr Asp Glu Ala Phe Asp	
230 235 240 245	
TGG AAA GAC AGT CCA ATG CTT AAA CAG ACT AGA CGC ATC ATG AAG CAG	1841
Trp Lys Asp Ser Pro Met Leu Lys Gln Thr Arg Arg Ile Met Lys Gln	

Fix in *Brick*  
edit

						250							255							260
CTC	ATG	TCA	GCG	GTC	TCG	TAT	ATC	CAT	TCA	AAG	AAA	CTG	ATT	CAC	AGG	1889				
Leu	Met	Ser	Ala	Val	Ser	Tyr	Ile	His	Ala	Lys	Lys	Leu	Ile	His	Arg					
			265				270				275									
GAC	ATC	AAA	CTC	GAA	AAT	ATT	TTC	TTA	AAC	TGC	GAC	GGC	AAG	ACA	GTG	1937				
Asp	Ile	Lys	Leu	Glu	Asn	Ile	Phe	Leu	Asn	Cys	Asp	Gly	Lys	Thr	Val					
			280				285				290									
CTG	GGC	GAC	TTT	GGA	ACT	GTC	ACG	CCT	TTT	GAA	AAT	GAG	CGG	GAG	CCC	1985				
Leu	Gly	Asp	Phe	Gly	Thr	Val	Thr	Pro	Phe	Glu	Asn	Glu	Arg	Glu	Pro					
			295				300				305									
TTC	GAA	TAT	GGA	TGG	GTG	GGG	ACC	GTG	GCT	ACT	AAC	TCT	CCC	GAG	ATA	2033				
Phe	Glu	Tyr	Gly	Trp	Val	Gly	Thr	Val	Ala	Thr	Asn	Ser	Pro	Glu	Ile					
			310				315				320				325					
CTC	GCC	AGG	GAT	TCG	TAC	TGT	GAA	ATT	ACA	GAC	ATT	TGG	AGC	TGC	GGA	2081				
Leu	Ala	Arg	Asp	Ser	Tyr	Cys	Glu	Ile	Thr	Asp	Ile	Trp	Ser	Cys	Gly					
			330				335				340									
GTA	GTA	TTG	CTG	GAA	ATG	GTA	AGC	CAT	GAA	TTT	TGC	CCG	ATC	GGC	GAT	2129				
Val	Val	Leu	Leu	Glu	Met	Val	Ser	His	Glu	Phe	Cys	Pro	Ile	Gly	Asp					
			345				350				355									
GGC	GGG	GGA	AAT	CCG	CAC	CAG	CAA	TTG	CTG	AAA	GTT	ATC	GAC	TCT	CTC	2177				
Gly	Gly	Gly	Asn	Pro	His	Gln	Gln	Leu	Leu	Lys	Val	Ile	Asp	Ser	Leu					
			360				365				370									
TCA	GTT	TGT	GAT	GAA	GAG	TTC	CCA	GAC	CCC	CCG	TGT	AAT	CTG	TAC	AAT	2225				
Ser	Val	Cys	Asp	Glu	Glu	Phe	Pro	Asp	Pro	Pro	Cys	Asn	Leu	Tyr	Asn					
			375				380				385									
TAT	TTG	CAT	TAT	GCG	AGC	ATC	GAT	CGC	GCC	GGA	CAT	ACG	GTC	CCG	TCG	2273				
Tyr	Leu	His	Tyr	Ala	Ser	Ile	Asp	Arg	Ala	Gly	His	Thr	Val	Pro	Ser					
			390				395				400				405					
CTC	ATA	CGG	AAC	CTC	CAC	CTT	CCG	GCG	GAT	GTG	GAA	TAC	CCT	CTA	GTT	2321				
Leu	Ile	Arg	Asn	Leu	His	Leu	Pro	Ala	Asp	Val	Glu	Tyr	Pro	Leu	Val					
			410				415				420									
AAA	ATG	CTT	ACT	TTT	GAC	TGG	CGT	TTG	AGA	CCC	AGC	GCG	GCC	GAA	GTA	2369				
Lys	Met	Leu	Phe	Asp	Trp	Arg	Leu	Arg	Pro	Ser	Ala	Ala	Glu	Val						
			425				430				435									
TTG	GCA	ATG	CCA	CTG	TTT	TCG	GCT	GAA	GAG	GAA	CGG	ACG	ATA	ACA	ATT	2417				
Leu	Ala	Met	Pro	Leu	Phe	Ser	Ala	Glu	Glu	Glu	Arg	Thr	Ile	Thr	Ile					
			440				445				450									
ATT	CAT	GGA	AAA	CAT	AAA	CCC	ATC	CGA	CCC	GAA	ATC	CGT	GCG	CGG	GTG	2465				
Ile	His	Gly	Lys	His	Lys	Pro	Ile	Arg	Pro	Glu	Ile	Arg	Ala	Arg	Val					
			455				460				465									
CCA	CGG	TCC	ATG	AGT	GAA	GGT	TAATAATAAA	GGACGGAGAT	AGAGAACTGA							2516				
Pro	Arg	Ser	Met	Ser	Glu	Gly														
			470				475													
AGCG																				

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GAA AGC AGC TCC TCC TCC GAC ATG CTA GAT CCG TTT TCC ACG GAT AAG Glu Ser Ser Ser Ser Ser Asp Met Leu Asp Pro Phe Ser Thr Asp Lys 85 90 95	2862
GAA TTT GGC GGT AAG TGG ACG GTA GAC GGA CCT GCC GAC ATT ACT GCC Glu Phe Gly Gly Lys Trp Thr Val Asp Gly Pro Ala Asp Ile Thr Ala 100 105 110	2910
GAG GTC CTT TCT CAG GCA TGG GAC GTT CTC CAA TTA GTG AAG CAT GAA Glu Val Leu Ser Gln Ala Trp Asp Val Leu Gln Leu Val Lys His Glu 115 120 125	2958
GAT GCG GAG GAG GAG AGA GTG ACT TAT GAG TCC AAA CCG ACC CCG ATA Asp Ala Glu Glu Glu Arg Val Thr Tyr Glu Ser Lys Pro Thr Pro Ile 130 135 140	3006
CAG CCG TTC AAT GCC TGG CCG GAC GGG CCG AGT TGG AAC GCG CAG GAT Gln Pro Phe Asn Ala Trp Pro Asp Gly Pro Ser Trp Asn Ala Gln Asp 145 150 155 160	3054
TTT ACT CGA GCG CCA ATA GTT TAT CCC TCT GCG GAG GTA TTG GAC GCA Phe Thr Arg Ala Pro Ile Val Tyr Pro Ser Ala Glu Val Leu Asp Ala 165 170 175	3102
GAG GCG TTG AAA GTA GGG GCA TTC GTT AGC CGA GTT TTA CAA TGT GTA Glu Ala Leu Lys Val Gly Ala Phe Val Ser Arg Val Leu Gln Cys Val 180 185 190	3150
CCG TTC ACG CGA TCA AAG AAA AGC GTT ACG GTG CCG GAT GCG CAG TCG Pro Phe Thr Arg Ser Lys Lys Ser Val Thr Val Arg Asp Ala Gln Ser 195 200 205	3198
TTT TTG GGG GAC TCG TTC TGG AGA ATA ATG CAG AAC GTT TAC ACG GTT Phe Leu Gly Asp Ser Phe Trp Arg Ile Met Gln Asn Val Tyr Thr Val 210 215 220	3246
TGC TTA CGA CAG CAC ATA ACT CGA CTC AGG CAC CCT TCC AGC AAA AGC Cys Leu Arg Gln His Ile Thr Arg Leu Arg His Pro Ser Ser Lys Ser 225 230 235 240	3294
ATT GTT AAC TGC AAC GAC CCT CTA TGG TAC GCC TAC GCG AAT CAA TTT Ile Val Asn Cys Asn Asp Pro Leu Trp Tyr Ala Tyr Ala Asn Gln Phe 245 250 255	3342
CAC TGG AGA GGA ATG CGC GTG CCG TCG CTT AAA TTA GCC TCT CCC CCG His Trp Arg Gly Met Arg Val Pro Ser Leu Lys Leu Ala Ser Pro Pro 260 265 270	3390
GAG GAG AAT ATT CAA CAC GGC CCA ATG GCC GCC GTT TTT AGA AAC GCG Glu Glu Asn Ile Gln His Gly Pro Met Ala Ala Val Phe Arg Asn Ala 275 280 285	3438
GGG GCT GGT CTG TTC CTG TGG CCT GCC ATG CGC GCA GCC TTT GAA GAG Gly Ala Gly Leu Phe Leu Trp Pro Ala Met Arg Ala Ala Phe Glu Glu 290 295 300	3486
CGC GAC AAG CGA CTG TTA AGA GCA TGC CTG TCT TCA CTC GAT ATC ATG Arg Asp Lys Arg Leu Leu Arg Ala Cys Leu Ser Ser Leu Asp Ile Met 305 310 315 320	3534
GAC GCA GCC GTC CTC GCG TCG TTT CCA TTT TAC TGG CGC GGC GTC CAA Asp Ala Ala Val Leu Ala Ser Phe Pro Phe Tyr Trp Arg Gly Val Gln 325 330 335	3582
GAC ACC TCG CGC TTC GAG CCT GCG CTG GGC TGT TTG TCA GAG TAC TTT Asp Thr Ser Arg Phe Glu Pro Ala Leu Gly Cys Leu Ser Glu Tyr Phe 340 345 350	3630
GCA CTA GTG GTG TTA CTG GCC GAG ACG GTC TTA GCG ACC ATG TTC GAC Ala Leu Val Val Leu Leu Ala Glu Thr Val Leu Ala Thr Met Phe Asp 355 360 365	3678
CAC GCA CTG GTA TTC ATG AGG GCG CTG GCA GAC GGC AAT TTC GAT GAC His Ala Leu Val Phe Met Arg Ala Leu Ala Asp Gly Asn Phe Asp Asp 370 375 380	3726
TAT GAC GAA ACT AGA TAT ATA GAC CCC GTT AAA AAC GAG TAC CTG AAC Tyr Asp Glu Thr Arg Tyr Ile Asp Pro Val Lys Asn Glu Tyr Leu Asn	3774



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385	390	395	400	
GGA GCC GAG GGT ACT CTG TTA CGG GGC ATA GTG GCC TCC AAC ACC GCT Gly Ala Glu Gly Thr Leu Leu Arg Gly Ile Val Ala Ser Asn Thr Ala 405 410 415				3822
CTG GCG GTG GTT TGC GCA AAC ACC TAT TCG ACG ATA AGA AAA CTC CCG Leu Ala Val Val Cys Ala Asn Thr Tyr Ser Thr Ile Arg Lys Leu Pro 420 425 430				3870
TCC GTG GCA ACT AGC GCG TGC AAT GTT GCC TAC AGG ACC GAA ACG CTG Ser Val Ala Thr Ser Ala Cys Asn Val Ala Tyr Arg Thr Glu Thr Leu 435 440 445				3918
AAA GCG AGG CGC CCT GGC ATG AGC GAC ATA TAC CGG ATA TTA CAA AAA Lys Ala Arg Arg Pro Gly Met Ser Asp Ile Tyr Arg Ile Leu Gln Lys 450 455 460				3966
GAG TTT TTC TTT TAC ATT GCG TGG CTC CAG AGG GTT GCA ACA CAC GCA Glu Phe Phe Phe Tyr Ile Ala Trp Leu Gln Arg Val Ala Thr His Ala 465 470 475 480				4014
AAT TTC TGT TTA AAC ATT CTG AAG AGA AGC GTG GAT ACG GGC CCC CGC Asn Phe Cys Leu Asn Ile Leu Lys Arg Ser Val Asp Thr Gly Pro Arg 485 490 495				4062
CAT TTT TGT TCA GGG CCA GCT CGG AGA AGC GGC TGC AGC AGT TAAATAAA His Phe Cys Ser Gly Pro Ala Arg Arg Ser Gly Cys Ser Ser 500 505 510				4112
ATG CTC TGC CCC CTT CTC GTG CCG ATT CAA TAT GAA GAC TTT TCG AAG Met Leu Cys Pro Leu Leu Val Pro Ile Gln Tyr Glu Asp Phe Ser Lys 1 5 10 15				4160
GCC ATG GGG TCT GAG CTC AAG AGG GAA AAG TTA GAG ACA TTC GTT AAA Ala Met Gly Ser Glu Leu Lys Arg Glu Lys Leu Glu Thr Phe Val Lys 20 25 30				4208
GCT ATT TCC AGC GAC AGG GAC CCG AGG GGG TCC TTA AGA TTT CTC ATT Ala Ile Ser Ser Asp Arg Asp Pro Arg Gly Ser Leu Arg Phe Leu Ile 35 40 45				4256
TCG GAC CAT GCA AGG GAA ATT ATT GCA GAC GGA GTA CGG TTT AAG CCG Ser Asp His Ala Arg Glu Ile Ile Ala Asp Gly Val Arg Phe Lys Pro 50 55 60				4304
GTG ATA GAC GAG CCG GTT CGG GCT TCA GTT GCG CTG AGT ACC GCT GCC Val Ile Asp Glu Pro Val Arg Ala Ser Val Ala Leu Ser Thr Ala Ala 65 70 75 80				4352
GCT GGG AAA GTG AAA GCG CGA CGC TTA ACC TCA GTT CGC GCG CCC GTA Ala Gly Lys Val Lys Ala Arg Arg Leu Thr Ser Val Arg Ala Pro Val 85 90 95				4400
CCG CCC GCA GGC GCC GTT TCC GCG CGC CGG AAA TCG GAA ATA TGA TA Pro Pro Ala Gly Ala Val Ser Ala Arg Arg Lys Ser Glu Ile * 100 105 110				4447
AAAATGCTTG GCATTTGCGG GCGAAGAGGC GTGATCTGAA GGGCTCCACA ATGACGTAAC TGAGCTACGC ATCCCTATAA AGTGTACSCG CTGACCGCTA GCCCATAACAG TGTACAGGA GGGGAGAGAG ACAACTTCAG CTCGAAGTCT GAAGAGACAT C ATG AGC GGC				4507 4567 4617
			Met Ser Gly 1	
TTC AGT AAC ATA GGA TCG ATT GCC ACC GTT TCC CTA GTA TGC TCG CTT Phe Ser Asn Ile Gly Ser Ile Ala Thr Val Ser Leu Val Cys Ser Leu 5 10 15				4665
TTG TGC GCA TCT GTA TTA GGG GCG CCG GTA CTG GAC GGG CTC GAG TCG Leu Cys Ala Ser Val Leu Gly Ala Pro Val Leu Asp Gly Leu Glu Ser 20 25 30 35				4713
AGC CCT TTC CCG TTC GGG GGC AAA ATT ATA GCC CAG GCG TGC AAC CGC Ser Pro Phe Pro Phe Gly Gly Lys Ile Ile Ala Gln Ala Cys Asn Arg 40 45 50				4761

[illegible]

Met Gly Thr Met

1

TTA	GTG	TTG	CGC	CTT	TTC	CTA	CTT	GCA	GTA	GCG	GAC	GCG	GCG	TTG	CCG	5756
Leu	Val	Leu	Arg	Leu	Phe	Leu	Leu	Ala	Val	Ala	Asp	Ala	Ala	Leu	Pro	
5					10					15					20	
ACC	GGC	AGA	TTC	TGC	CGA	GTT	TGG	AAG	GTG	CCT	CCG	GGA	GGA	ACC	ATC	5804
Thr	Gly	Arg	Phe	Cys	Arg	Val	Trp	Lys	Val	Pro	Pro	Gly	Gly	Thr	Ile	
				25					30					35		

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CAA GAG AAC CTG GCG GTG CTC GCG GAA TCG CCG GTC ACG GGA CAC GCG Gln Glu Asn Leu Ala Val Leu Ala Glu Ser Pro Val Thr Gly His Ala 40 45 50	5852
ACA TAT CCG CCG CCT GAA GGC GCC GTC AGC TTT CAG ATT TTT GCG GAC Thr Tyr Pro Pro Pro Glu Gly Ala Val Ser Phe Gln Ile Phe Ala Asp 55 60 65	5900
ACC CCT ACT TTG CGC ATT CGC TAC GGG CCT ACG GAG GAC GAA CTT GCA Thr Pro Thr Leu Arg Ile Arg Tyr Gly Pro Thr Glu Asp Glu Leu Ala 70 75 80	5948
CTG GAG CGC GGG ACG TCC GCC TCA GAC GCG GAC AAC GTG ACA TTT TCG Leu Glu Arg Gly Thr Ser Ala Ser Asp Ala Asp Asn Val Thr Phe Ser 85 90 95 100	5996
CTG TCA TAT CCG CCG CCG CCA GAA ATT CAC GGA GCA TAC TTC ACC ATA Leu Ser Tyr Arg Pro Arg Pro Glu Ile His Gly Ala Tyr Phe Thr Ile 105 110 115	6044
GGG GTA TTC GCT ACT GGC CAG AGC ACG GAA AGC AGC TAT TCG GTC ATC Gly Val Phe Ala Thr Gly Gln Ser Thr Glu Ser Ser Tyr Ser Val Ile 120 125 130	6092
AGT CGG GTC TTA GTT AAC GCC TCT CTG GAA CGG TCC GTG CGC CTG GAA Ser Arg Val Leu Val Asn Ala Ser Leu Glu Arg Ser Val Arg Leu Glu 135 140 145	6140
ACG CCG TGC GAT GAA AAT TTT TTG CAG AAC GAG CCT ACA TGG GGC TCG Thr Pro Cys Asp Glu Asn Phe Leu Gln Asn Glu Pro Thr Trp Gly Ser 150 155 160	6188
AAG CGT TGG TTA GGC CCC CCG TCG CCT TAT GTG CGA GAT AAC GAT GTC Lys Arg Trp Leu Gly Pro Pro Ser Pro Tyr Val Arg Asp Asn Asp Val 165 170 175 180	6236
GCC GTG TTG ACA AAA GCG CAG TAC ATT GGG GAG TGC TAC TCC AAC TCG Ala Val Leu Thr Lys Ala Gln Tyr Ile Gly Glu Cys Tyr Ser Asn Ser 185 190 195	6284
GCG GCC CAG ACG GGG CTC ACG TCT CTC AAC ATG ACC TTT TTC TAT TCG Ala Ala Gln Thr Gly Leu Thr Ser Leu Asn Met Thr Phe Phe Tyr Ser 200 205 210	6332
CCT AAA AGA ATA GTA AAC GTC ACG TGG ACA ACC GGC GGC CCC TCC CCC Pro Lys Arg Ile Val Asn Val Thr Trp Thr Thr Gly Gly Pro Ser Pro 215 220 225	6380
TCG CGC ATA ACG GTA TAC TCG TCG CGG GAG AAC GGG CAG CCC GTG TTG Ser Arg Ile Thr Val Tyr Ser Ser Arg Glu Asn Gly Gln Pro Val Leu 230 235 240	6428
AGG AAC GTT TCT GAC GGG TTC TTG GTT AAG TAC ACT CCC GAC ATT GAC Arg Asn Val Ser Asp Gly Phe Leu Val Lys Tyr Thr Pro Asp Ile Asp 245 250 255 260	6476
GGC CGG GCC ATG ATA AAC GTT ATT GCC AAT TAT TCG CCG GCG GAC TCC Gly Arg Ala Met Ile Asn Val Ile Ala Asn Tyr Ser Pro Ala Asp Ser 265 270 275	6524
GGC AGC GTC CTC GCG TTT ACG GCC TTT AGG GAA GGA AAA CTC CCA TCC Gly Ser Val Leu Ala Phe Thr Ala Phe Arg Glu Gly Lys Leu Pro Ser 280 285 290	6572
GCG ATT CAA CTG CAC CGG ATA GAT ATG TCC GGG ACT GAG CCG CCG GGG Ala Ile Gln Leu His Arg Ile Asp Met Ser Gly Thr Glu Pro Pro Gly 295 300 305	6620
ACT GAA ACG ACC TTC GAC TGT CAA AAA ATG ATA GAA ACC CCG TAC CGA Thr Glu Thr Thr Phe Asp Cys Gln Lys Met Ile Glu Thr Pro Tyr Arg 310 315 320	6668
GCG CTC GGG AGC AAT GTT CCC AGG GAC GAC TCT ATC CGT CCG GGG GCC Ala Leu Gly Ser Asn Val Pro Arg Asp Asp Ser Ile Arg Pro Gly Ala 325 330 335 340	6716
ACT CTG CCT CCG TTC GAT ACC GCA GCA CCT GAT TTC GAT ACA GGT ACT Thr Leu Pro Pro Phe Asp Thr Ala Ala Pro Asp Phe Asp Thr Gly Thr 345 350 355	6764

345										350										355										
TCC	CCG	ACC	CCC	ACT	ACC	GTG	CCA	GAG	CCA	GCC	ATT	ACT	ACA	CTC	ATA	6812														
Ser	Pro	Thr	Pro	Thr	Thr	Val	Pro	Glu	Pro	Ala	Ile	Thr	Thr	Leu	Ile															
360 365 370																														
CCG	CGC	AGC	ACT	AGC	GAT	ATG	GGA	TTC	TTC	TCC	ACG	GCA	CGT	GCT	ACC	6860														
Pro	Arg	Ser	Thr	Ser	Asp	Met	Gly	Phe	Phe	Ser	Thr	Ala	Arg	Ala	Thr															
375 380 385																														
GGA	TCA	GAA	ACT	CTT	TCG	GTA	CCC	GTC	CAG	GAA	ACG	GAT	AGA	ACT	CTT	6908														
Gly	Ser	Glu	Thr	Leu	Ser	Val	Pro	Val	Gln	Glu	Thr	Asp	Arg	Thr	Leu															
390 395 400																														
TCG	ACA	ACT	CCT	CTT	ACC	CTT	CCA	CTG	ACT	CCC	GGT	GAG	TCA	GAA	AAT	6956														
Ser	Thr	Thr	Pro	Leu	Thr	Leu	Pro	Leu	Thr	Pro	Gly	Glu	Ser	Glu	Asn															
405 410 415 420																														
ACA	CTG	TTT	CCT	ACG	ACC	GCG	CCG	GGG	ATT	TCT	ACC	GAG	ACC	CCG	AGC	7004														
Thr	Leu	Phe	Pro	Thr	Thr	Ala	Pro	Gly	Ile	Ser	Thr	Glu	Thr	Pro	Ser															
425 430 435																														
GCG	GCA	CAT	GAA	ACT	ACA	CAG	ACC	CAG	AGT	GCA	GAA	ACG	GTG	GTC	TTT	7052														
Ala	Ala	His	Glu	Thr	Thr	Gln	Thr	Gln	Ser	Ala	Glu	Thr	Val	Val	Phe															
440 445 450																														
ACT	CAG	AGT	CCG	AGT	ACC	GAG	TCG	GAA	ACC	GCG	CGG	TCC	CAG	AGT	CAG	7100														
Thr	Gln	Ser	Pro	Ser	Thr	Glu	Ser	Glu	Thr	Ala	Arg	Ser	Gln	Ser	Gln															
455 460 465																														
GAA	CCG	TGG	TAT	TTT	ACT	CAG	ACT	CCG	AGT	ACT	GAA	CAG	GCG	GCT	CTT	7148														
Glu	Pro	Trp	Tyr	Phe	Thr	Gln	Thr	Pro	Ser	Thr	Glu	Gln	Ala	Ala	Leu															
470 475 480																														
ACT	CAG	ACG	CAG	ATC	GCA	GAA	ACG	GAG	GCG	TTG	TTT	ACT	CAG	ACT	CCG	7196														
Thr	Gln	Thr	Gln	Ile	Ala	Glu	Thr	Glu	Ala	Leu	Phe	Thr	Gln	Thr	Pro															
485 490 495 500																														
AGT	GCT	GAA	CAG	ATG	ACT	TTT	ACT	CAG	ACT	CCG	GGT	GCA	GAA	ACC	GAG	7244														
Ser	Ala	Glu	Gln	Met	Thr	Phe	Thr	Gln	Thr	Pro	Gly	Ala	Glu	Thr	Glu															
505 510 515																														
GCA	CCT	GCC	CAG	ACC	CCG	AGC	ACG	ATA	CCC	GAG	ATA	TTT	ACT	CAG	TCT	7292														
Ala	Pro	Ala	Gln	Thr	Pro	Ser	Thr	Ile	Pro	Glu	Ile	Phe	Thr	Gln	Ser															
520 525 530																														
CGT	AGC	ACG	CCC	CCC	GAA	ACC	GCT	CGC	GCT	CCG	AGC	GCG	GCG	CCG	GAG	7340														
Arg	Ser	Thr	Pro	Pro	Glu	Thr	Ala	Arg	Ala	Pro	Ser	Ala	Ala	Pro	Glu															
535 540 545																														
GTT	TTT	ACA	CAG	AGT	TCG	AGT	ACG	GTA	ACG	GAG	GTG	TTT	ACT	CAG	ACC	7388														
Val	Phe	Thr	Gln	Ser	Ser	Ser	Thr	Val	Thr	Glu	Val	Phe	Thr	Gln	Thr															
550 555 560																														
CCG	AGC	ACG	GTA	CCG	AAA	ACT	ACT	CTG	AGT	TCG	AGT	ACT	GAA	CCG	GCG	7436														
Pro	Ser	Thr	Val	Pro	Lys	Thr	Thr	Leu	Ser	Ser	Ser	Thr	Glu	Pro	Ala															
565 570 575 580																														
ATT	TTT	ACT	CGG	ACT	CAG	AGC	GCG	GGA	ACT	GAG	GCC	TTT	ACT	CAG	ACT	7484														
Ile	Phe	Thr	Arg	Thr	Gln	Ser	Ala	Gly	Thr	Glu	Ala	Phe	Thr	Gln	Thr															
585 590 595																														
TCG	AGT	GCC	GAG	CCG	GAC	ACT	ATG	CGA	ACT	CAG	AGT	ACT	GAA	ACA	CAC	7532														
Ser	Ser	Ala	Pro	Pro	Asp																									

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Ser	Ala	Ala	Pro	Glu	Val	Tyr	Thr	Arg	Ser	Ser	Ser	Thr	Met	Pro	Glu	
				665					670					675		
ACT	GCA	CAG	AGC	ACA	CCC	CTG	GCC	TCG	CAA	AAC	CCT	ACC	AGT	TCG	GGA	7772
Thr	Ala	Gln	Ser	Thr	Pro	Leu	Ala	Ser	Gln	Asn	Pro	Thr	Ser	Ser	Gly	
				680				685					690			
ACC	GGG	ACG	CAT	AAT	ACT	GAA	CCG	AGG	ACT	TAT	CCA	GTG	CAA	ACG	ACA	7820
Thr	Gly	Thr	His	Asn	Thr	Glu	Pro	Arg	Thr	Tyr	Pro	Val	Gln	Thr	Thr	
				695			700					705				
CCA	CAT	ACC	CAG	AAA	CTC	TAC	ACA	GAA	AAT	AAG	ACT	TTA	TCG	TTT	CCT	7868
Pro	His	Thr	Gln	Lys	Leu	Tyr	Thr	Glu	Asn	Lys	Thr	Leu	Ser	Phe	Pro	
				710			715					720				
ACT	GTT	GTT	TCA	GAA	TTC	CAT	GAG	ATG	TCG	ACG	GCA	GAG	TCG	CAG	ACG	7916
Thr	Val	Val	Ser	Glu	Phe	His	Glu	Met	Ser	Thr	Ala	Glu	Ser	Gln	Thr	
						730					735				740	
CCC	CTA	TTG	GAC	GTC	AAA	ATT	GTA	GAG	GTG	AAG	TTT	TCA	AAC	GAT	GGC	7964
Pro	Leu	Leu	Asp	Val	Lys	Ile	Val	Glu	Val	Lys	Phe	Ser	Asn	Asp	Gly	
				745					750					755		
GAA	GTA	ACG	GCG	ACT	TGC	GTT	TCC	ACC	GTC	AAA	TCT	CCC	TAT	AGG	GTA	8012
Glu	Val	Thr	Ala	Thr	Cys	Val	Ser	Thr	Val	Lys	Ser	Pro	Tyr	Arg	Val	
				760				765					770			
GAA	ACT	AAT	TGG	AAA	GTA	GAC	CTC	GTA	GAT	GTA	ATG	GAT	GAA	ATT	TCT	8060
Glu	Thr	Asn	Trp	Lys	Val	Asp	Leu	Val	Asp	Val	Met	Asp	Glu	Ile	Ser	
				775			780					785				
GGG	AAC	AGT	CCC	GCC	GGG	GTT	TTT	AAC	AGT	AAT	GAG	AAA	TGG	CAG	AAA	8108
Gly	Asn	Ser	Pro	Ala	Gly	Val	Phe	Asn	Ser	Asn	Glu	Lys	Trp	Gln	Lys	
				790			795				800					
CAG	CTG	TAC	TAC	AGA	GTA	ACC	GAT	GGA	AGA	ACA	TCG	GTC	CAG	CTA	ATG	8156
Gln	Leu	Tyr	Tyr	Arg	Val	Thr	Asp	Gly	Arg	Thr	Ser	Val	Gln	Leu	Met	
					810					815					820	
TGC	CTG	TCG	TGC	ACG	AGC	CAT	TCT	CCG	GAA	CCT	TAC	TGT	CTT	TTC	GAC	8204
Cys	Leu	Ser	Cys	Thr	Ser	His	Ser	Pro	Glu	Pro	Tyr	Cys	Leu	Phe	Asp	
				825					830					835		
ACG	TCT	CTT	ATA	GCG	AGG	GAA	AAA	GAT	ATC	GCG	CCA	GAG	TTA	TAC	TTT	8252
Thr	Ser	Leu	Ile	Ala	Arg	Glu	Lys	Asp	Ile	Ala	Pro	Glu	Leu	Tyr	Phe	
				840				845					850			
ACC	TCT	GAT	CCG	CAA	ACG	GCA	TAC	TGC	ACA	ATA	ACT	CTG	CCG	TCC	GGC	8300
Thr	Ser	Asp	Pro	Gln	Thr	Ala	Tyr	Cys	Thr	Ile	Thr	Leu	Pro	Ser	Gly	
				855			860					865				
GTT	GTT	CCG	AGA	TTC	GAA	TGG	AGC	CTT	AAT	AAT	GTT	TCA	CTG	CCG	GAA	8348
Val	Val	Pro	Arg	Phe	Glu	Trp	Ser	Leu	Asn	Asn	Val	Ser	Leu	Pro	Glu	
				870			875				880					
TAT	TTG	ACG	GCC	ACG	ACC	GTT	GTT	TCG	CAT	ACC	GCT	GGC	CAA	AGT	ACA	8396
Tyr	Leu	Thr	Ala	Thr	Thr	Val	Val	Ser	His	Thr	Ala	Gly	Gln	Ser	Thr	
						890				895					900	
GTG	TGG	AAG	AGC	AGC	GCG	AGA	GCA	GGC	GAG	GCG	TGG	ATT	TCT	GGC	CGG	8444
Val	Trp	Lys	Ser	Ser	Ala	Arg	Ala	Gly	Glu	Ala	Trp	Ile	Ser	Gly	Arg	
				905				910						915		
GGA	GGC	AAT	ATA	TAC	GAA	TGC	ACC	GTC	CTC	ATC	TCA	GAC	GGC	ACT	CGC	8492
Gly	Gly	Asn	Ile	Tyr	Glu	Cys	Thr	Val	Leu	Ile	Ser	Asp	Gly	Thr	Arg	
				920				925					930			
GTT	ACT	ACG	CGA	AAG	GAG	AGG	TGC	TTA	ACA	AAC	ACA	TGG	ATT	GCG	GTG	8540
Val	Thr	Thr	Arg	Lys	Glu	Arg	Cys	Leu	Thr	Asn	Thr	Trp	Ile	Ala	Val	
				935			940					945				
GAA	AAC	GGT	GCT	GCT	CAG	GCG	CAG	CTG	TAT	TCA	CTC	TTT	TCT	GGA	CTT	8588
Glu	Asn	Gly	Ala	Ala	Gln	Ala	Gln	Leu	Tyr	Ser	Leu	Phe	Ser	Gly	Leu	
				950			955				960					
GTG	TCA	GGA	TTA	TGC	GGG	AGC	ATA	TCT	GCT	TTG	TAC	GCA	ACG	CTA	TGG	8636
Val	Ser	Gly	Leu	Cys	Gly	Ser	Ile	Ser	Ala	Leu	Tyr	Ala	Thr	Leu	Trp	
					970					975					980	

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ACC GCC ATT TAT TTT TGAGGAATGC TTTTGGACT ATCGTACTGC TTTCTTCCTT	8691
Thr Ala Ile Tyr Phe	
985	
CGCTAGCCAG AGCACCCCGG CCGTCACGTA CGACTACATT TTAGGCCGTC GCGCGCTCGA	8751
CGCGCTAACC ATACCCGGCGG TTGGCCCGTA TAACAGATAC CTCCTAGGG TATCAAGAGG	8811
CTGCGACGTT GTGAGCTCA ACCCGATTTC TAACGTGGAC GACATGATAT CGCGCGCCAA	8871
AGAAAAAGAG AAGGGGGGCC CTTTCGAGGC CTCCGTCGTC TGGTTCTACG TGATTAAAGG	8931
CGACGACGGC GAGGACAAGT ACTGTCCAAT CTATAGAAAA GAGTACAGGG AATGTGGCGA	8991
CGTACAACCTG CTATCTGAAT GCGCCGTTCA ATCTGCACAG ATGTGGGCAG TGGACTATGT	9051
TCCTAGCACC CTTGTATCGC GAAATGGCGC GGGACTGACT ATATTCTCCC CCACTGCTGC	9111
GCTCTCTGGC CAATACTTGC TGACCCTGAA AATCGGGAGA TTTGCGCAA CAGCTCTCGT	9171
AACTCTAGAA GTTAACGATC GCTGTTTAAA GATCGGGTCG CAGCTTAACT TTTTACCGTC	9231
GAAATGCTGG ACAACAGAAC AGTATCAGAC TGGATTTCAG GCGAACACC TTTATCCGAT	9291
CGCAGACACC AATACACGAC ACGCGGACGA CGTATATCGG GGATACGAAG ATATTCTGCA	9351
GCGCTGGAAT AATTGTGTA GGAAGAGAA TCCTAGCGCG CCAGACCTC GTCCAGATAG	9411
CGTCCCGCAA GAAATTCCTG CTGTAACCAA GAAAGCGGAA GGGCGCACCC CGGACGCAGA	9471
AAGCAGCGAA AAGAAGGCC CTCCAGAAGA CTCGGAGGAC GACATGCAGG CAGAGGCTTC	9531
TGGAGAAAAA CCTGCCGCC TCCCCGAAGA CGACGAAGTC CCCGAGGACA CCGAGCACGA	9591
TGATCCAAAC TCGGATCCTG ACTATTACAA TGACATGCCC GCCGTGATCC CGGTGGAGGA	9651
GACTACTAAA AGTCTAATG CCGTCTCCAT GCCCATATTC GCGCGTTCG TAGCCTGCGC	9711
GGTCGCGCTC TTGGGGCTAC TGGTTTGAG CATCGTAAAA TGC GCGCGTA GCTAATCGAG	9771
CCTAGAATAG GTGGTTTCTT CCTACATGCC ACGCCTCACG CTCATAATAT AAATCACATG	9831
GAATAGCATA CCAATGCCTA TTCATTGGGA CGTTCGAAAA GC	9873
ATG GCA TCG CTA CTT GGA ACT	9894
Met Ala Ser Leu Leu Gly Thr	
1 5	
CTG GCT CTC CTT GCC GCG ACG CTC GCA CCC TTC GGC GCG ATG GGA ATC	9942
Leu Ala Leu Leu Ala Ala Thr Leu Ala Pro Phe Gly Ala Met Gly Ile	
10 15 20	
GTG ATC ACT GGA AAT CAC GTC TCC GCC AGG ATT GAC GAC GAT CAC ATC	9990
Val Ile Thr Gly Asn His Val Ser Ala Arg Ile Asp Asp Asp His Ile	
25 30 35	
GTG ATC GTC GCG CCT CGC CCC GAA GCT ACA ATT CAA CTG CAG CTA TTT	10038
Val Ile Val Ala Pro Arg Pro Glu Ala Thr Ile Gln Leu Gln Leu Phe	
40 45 50 55	
TTC ATG CCT GGC CAG AGA CCC CAC AAA CCC TAC TCA GGA ACC GTC CGC	10086
Phe Met Pro Gly Gln Arg Pro His Lys Pro Tyr Ser Gly Thr Val Arg	
60 65 70	
GTC GCG TTT CGG TCT GAT ATA ACA AAC CAG TGC TAC CAG GAA CTT AGC	10134
Val Ala Phe Arg Ser Asp Ile Thr Asn Gln Cys Tyr Gln Glu Leu Ser	
75 80 85	
GAG GAG CGC TTT GAA AAT TGC ACT CAT CGA TCG TCT TCT GTT TTT GTC	10182
Glu Glu Arg Phe Glu Asn Cys Thr His Arg Ser Ser Ser Val Phe Val	
90 95 100	
GGC TGT AAA GTG ACC GAG TAC ACG TTC TCC GCC TCG AAC AGA CTA ACC	10230
Gly Cys Lys Val Thr Glu Tyr Thr Phe Ser Ala Ser Asn Arg Leu Thr	
105 110 115	
GGA CCT CCA CAC CCG TTT AAG CTC ACT ATA CGA AAT CCT CGT CCG AAC	10278
Gly Pro Pro His Pro Phe Lys Leu Thr Ile Arg Asn Pro Arg Pro Asn	
120 125 130 135	

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GAC AGC GGG ATG TTC TAC GTA ATT GTT CGG CTA GAC GAC ACC AAA GAA	10326
Asp Ser Gly Met Phe Tyr Val Ile Val Arg Leu Asp Asp Thr Lys Glu	
140 145 150	
CCC ATT GAC GTC TTC GCG ATC CAA CTA TCG GTG TAT CAA TTC GCG AAC	10374
Pro Ile Asp Val Phe Ala Ile Gln Leu Ser Val Tyr Gln Phe Ala Asn	
155 160 165	
ACC GCC GCG ACT CGC GGA CTC TAT TCC AAG GCT TCG TGT CGC ACC TTC	10422
Thr Ala Ala Thr Arg Gly Leu Tyr Ser Lys Ala Ser Cys Arg Thr Phe	
170 175 180	
GGA TTA CCT ACC GTC CAA CTT GAG GCC TAT CTC AGG ACC GAG GAA AGT	10470
Gly Leu Pro Thr Val Gln Leu Glu Ala Tyr Leu Arg Thr Glu Glu Ser	
185 190 195	
TGG CGC AAC TGG CAA GCG TAC GTT GCC ACG GAG GCC ACG ACG ACC AGC	10518
Trp Arg Asn Trp Gln Ala Tyr Val Ala Thr Glu Ala Thr Thr Thr Ser	
200 205 210 215	
GCC GAG GCG ACA ACC CCG ACG CCC GTC ACT GCA ACC AGC GCC TCC GAA	10566
Ala Glu Ala Thr Thr Pro Thr Pro Val Thr Ala Thr Ser Ala Ser Glu	
220 225 230	
CTT GAA GCG GAA CAC TTT ACC TTT CCC TGG CTA GAA AAT GGC GTG GAT	10614
Leu Glu Ala Glu His Phe Thr Phe Pro Trp Leu Glu Asn Gly Val Asp	
235 240 245	
CAT TAC GAA CCG ACA CCC GCA AAC GAA AAT TCA AAC GTT ACT GTC CGT	10662
His Tyr Glu Pro Thr Pro Ala Asn Glu Asn Ser Asn Val Thr Val Arg	
250 255 260	
CTC GGG ACA ATG AGC CCT ACG CTA ATT GGG GTA ACC GTG GCT GCC GTC	10710
Leu Gly Thr Met Ser Pro Thr Leu Ile Gly Val Thr Val Ala Ala Val	
265 270 275	
GTG AGC GCA ACG ATC GGC CTC GTC ATT GTA ATT TCC ATC GTC ACC AGA	10758
Val Ser Ala Thr Ile Gly Leu Val Ile Val Ile Ser Ile Val Thr Arg	
280 285 290 295	
AAC ATG TGC ACC CCG CAC CGA AAA TTA GAC ACG GTC TCG CAA GAC GAC	10806
Asn Met Cys Thr Pro His Arg Lys Leu Asp Thr Val Ser Gln Asp Asp	
300 305 310	
GAA GAA CGT TCC CAA ACT AGA AGG GAA TCG CGA AAA TTT GGA CCC ATG	10854
Glu Glu Arg Ser Gln Thr Arg Arg Glu Ser Arg Lys Phe Gly Pro Met	
315 320 325	
GTT GCG TGC GAA ATA AAC AAG GGC GCT GAC CAG GAT AGT GAA CTT GTG	10902
Val Ala Cys Glu Ile Asn Lys Gly Ala Asp Gln Asp Ser Glu Leu Val	
330 335 340	
GAA CTG GTT GCG ATT GTT AAC CCG TCT GCG CTA AGC TCG CCC GAC TCA	10950
Glu Leu Val Ala Ile Val Asn Pro Ser Ala Leu Ser Ser Pro Asp Ser	
345 350 355	
ATA AAA ATG TGATTAAGTC TGAATGTGGC TCTCCAATCA TTTCGATTCT	10999
Ile Lys Met	
360	
CTAATCTCCC AATCCTCTCA AAAGGGGCAG TATCGGACAC GGACTGGGAG GGGCGTACTA	11059
CACGATAGTT ATATGGTACA GCAGAGGCCT CTGAACACTT AGGAGGAGAA TTCAGCCGGG	11119
GAGAGCCCTT GTTGAGTAGG CTTGGGAGCA TATTGCAGG ATG AAC ATG TTA GTG	11173
Met Asn Met Leu Val	
1 5	
ATA GTT CTC GCC TCT TGT CTT GCG CGC CTA ACT TTT GCG ACG CGA CAC	11221
Ile Val Leu Ala Ser Cys Leu Ala Arg Leu Thr Phe Ala Thr Arg His	
10 15 20	
GTC CTC TTT TTG GAA GGC ACT CAG GCT GTC CTC GGG GAA GAT GAT CCC	11269
Val Leu Phe Leu Glu Gly Thr Gln Ala Val Leu Gly Glu Asp Asp Pro	
25 30 35	
AGA AAC GTT CCG GAA GGG ACT GTA ATC AAA TGG ACA AAA GTC CTG CGG	11317

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Arg	Asn	Val	Pro	Glu	Gly	Thr	Val	Ile	Lys	Trp	Thr	Lys	Val	Leu	Arg	
		40					45					50				
AAC	GCG	TGC	AAG	ATG	AAG	GCG	GCC	GAT	GTC	TGC	TCT	TCG	CCT	AAC	TAT	11365
Asn	Ala	Cys	Lys	Met	Lys	Ala	Ala	Asp	Val	Cys	Ser	Ser	Pro	Asn	Tyr	
	55					60				65						
TGC	TTT	CAT	GAT	TTA	ATT	TAC	GAC	GGA	GGA	AAG	AAA	GAC	TGC	CCG	CCC	11413
Cys	Phe	His	Asp	Leu	Ile	Tyr	Asp	Gly	Gly	Lys	Lys	Asp	Cys	Pro	Pro	
	70				75					80					85	
GCG	GGA	CCC	CTG	TCT	GCA	AAC	CTG	GTA	ATT	TTA	CTA	AAG	CGC	GGC	GAA	11461
Ala	Gly	Pro	Leu	Ser	Ala	Asn	Leu	Val	Ile	Leu	Leu	Lys	Arg	Gly	Glu	
			90					95						100		
AGC	TTC	GTC	GTG	CTG	GGT	TCT	GGG	CTA	CAC	AAC	AGC	AAT	ATA	ACT	AAT	11509
Ser	Phe	Val	Val	Leu	Gly	Ser	Gly	Leu	His	Asn	Ser	Asn	Ile	Thr	Asn	
			105					110						115		
ATC	ATG	TGG	ACA	GAG	TAC	GGA	GGC	CTG	CTC	TTT	GAT	CCT	GTA	ACT	CGT	11557
Ile	Met	Trp	Thr	Glu	Tyr	Gly	Gly	Leu	Leu	Phe	Asp	Pro	Val	Thr	Arg	
	120					125						130				
TCG	GAC	GAG	GGA	ATC	TAT	TTT	CGA	CGG	ATC	TCT	CAG	CCA	GAT	CTG	GCC	11605
Ser	Asp	Glu	Gly	Ile	Tyr	Phe	Arg	Arg	Ile	Ser	Gln	Pro	Asp	Leu	Ala	
	135					140						145				
ATG	GAA	ACT	ACA	TCG	TAC	AAC	GTC	AGC	GTT	CTT	TCG	CAC	GTA	GAC	GAG	11653
Met	Glu	Thr	Thr	Ser	Tyr	Asn	Val	Ser	Val	Leu	Ser	His	Val	Asp	Glu	
	150					155				160					165	
AAG	GCT	CCA	GCA	CCG	CAC	GAG	GTG	GAG	ATA	GAC	ACC	ATC	AAG	CCG	TCA	11701
Lys	Ala	Pro	Ala	Pro	His	Glu	Val	Glu	Ile	Asp	Thr	Ile	Lys	Pro	Ser	
			170						175					180		
GAG	GCC	CAC	GCG	CAC	GTG	GAA	TTA	CAA	ATG	CTG	CCG	TTT	CAT	GAA	CTC	11749
Glu	Ala	His	Ala	His	Val	Glu	Leu	Gln	Met	Leu	Pro	Phe	His	Glu	Leu	
			185					190						195		
AAC	GAC	AAC	AGC	CCC	ACC	TAT	GTG	ACC	CCT	GTT	CTT	AGA	GTC	TTC	CCA	11797
Asn	Asp	Asn	Ser	Pro	Thr	Tyr	Val	Thr	Pro	Val	Leu	Arg	Val	Phe	Pro	
			200				205					210				
CCG	ACC	GAG	CAC	GTA	AAA	TTT	AAC	GTT	ACG	TAT	TCG	TGG	TAT	GGG	TTT	11845
Pro	Thr	Glu	His	Val	Lys	Phe	Asn	Val	Thr	Tyr	Ser	Trp	Tyr	Gly	Phe	
	215					220						225				
GAT	GTC	AAA	GAG	GAG	TGC	GAA	GAA	GTG	AAA	CTG	TTC	GAG	CCG	TGC	GTA	11893
Asp	Val	Lys	Glu	Glu	Cys	Glu	Glu	Val	Lys	Leu	Phe	Glu	Pro	Cys	Val	
	230				235					240					245	
TAC	CAT	CCT	ACA	GAC	GGC	AAA	TGT	CAG	TTT	CCC	GCA	ACC	AAC	CAG	AGA	11941
Tyr	His	Pro	Thr	Asp	Gly	Lys	Cys	Gln	Phe	Pro	Ala	Thr	Asn	Gln	Arg	
			250						255					260		
TGC	CTC	ATA	GGA	TCT	GTC	TTG	ATG	GCG	GAA	TTC	TTG	GGC	GCG	GCC	TCT	11989
Cys	Leu	Ile	Gly	Ser	Val	Leu	Met	Ala	Glu	Phe	Leu	Gly	Ala	Ala	Ser	
			265					270						275		
TTG	CTG	GAT	TGT	TCC	CGC	GAT	ACT	CTA	GAA	GAC	TGC	CAC	GAA	AAT	CGC	12037
Leu	Leu	Asp	Cys	Ser	Arg	Asp	Thr	Leu	Glu	Asp	Cys	His	Glu	Asn	Arg	
			280				285					290				
GTG	CCG	AAC	CTA	CGG	TTC	GAT	TCG	CGA	CTC	TCC	GAG	TCA	CGC	GCA	GGC	12085
Val	Pro	Asn	Leu	Arg	Phe	Asp	Ser	Arg	Leu	Ser	Glu	Ser	Arg	Ala	Gly	
			295				300					305				
CTG	GTG	ATC	AGT	CCT	CTT	ATA	GCC	ATC	CCC	AAA	GTT	TTG	ATT	ATA	GTC	12133
Leu	Val	Ile	Ser	Pro	Leu	Ile	Ala	Ile	Pro	Lys	Val	Leu	Ile	Ile	Val	
	310					315				320					325	
GTT	TCC	GAC	GGA	GAC	ATT	TTG	GGA	TGG	AGC	TAC	ACG	GTG	CTC	GGG	AAA	12181
Val	Ser	Asp	Gly	Asp	Ile	Leu	Gly	Trp	Ser	Tyr	Thr	Val	Leu	Gly	Lys	
			330						335					340		
CGT	AAC	AGT	CCG	CGC	GTA	GTA	GTC	GAA	ACG	CAC	ATG	CCC	TCG	AAG	GTC	12229
Arg	Asn	Ser	Pro	Arg	Val	Val	Val	Glu	Thr	His	Met	Pro	Ser	Lys	Val	
			345					350						355		



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CCG ATG AAC AAA GTA GTA ATT GGC AGT CCC GGA CCA ATG GAC GAA ACG	12277
Pro Met Asn Lys Val Val Ile Gly Ser Pro Gly Pro Met Asp Glu Thr	
360 365 370	
GGT AAC TAT AAA ATG TAC TTC GTC GTC GCG GGG GTG GCC GCG ACG TGC	12325
Gly Asn Tyr Lys Met Tyr Phe Val Val Ala Gly Val Ala Ala Thr Cys	
375 380 385	
GTA ATT CTT ACA TGC GCT CTG CTT GTG GGG AAA AAG AAG TGC CCC GCG	12373
Val Ile Leu Thr Cys Ala Leu Leu Val Gly Lys Lys Lys Cys Pro Ala	
390 395 400 405	
CAC CAA ATG GGT ACT TTT TCC AAG ACC GAA CCA TTG TAC GCG CCG CTC	12421
His Gln Met Gly Thr Phe Ser Lys Thr Glu Pro Leu Tyr Ala Pro Leu	
410 415 420	
CCC AAA AAC GAG TTT GAG GCC GGC GGG CTT ACG GAC GAT GAG GAA GTG	12469
Pro Lys Asn Glu Phe Glu Ala Gly Gly Leu Thr Asp Asp Glu Glu Val	
425 430 435	
ATT TAT GAC GAA GTA TAC GAA CCC CTA TTT CCG GGC TAC TGT AAG CAG	12517
Ile Tyr Asp Glu Val Tyr Glu Pro Leu Phe Arg Gly Tyr Cys Lys Gln	
440 445 450	
GAA TTC CCG GAA GAT GTG AAT ACC TTT TTC GGT GCG GTC GTG GAG GGA	12565
Glu Phe Arg Glu Asp Val Asn Thr Phe Phe Gly Ala Val Val Glu Gly	
455 460 465	
GAA AGG GCC TTA AAC TTT AAA TCC GCC ATC GCA TCA ATG GCA GAT CGC	12613
Glu Arg Ala Leu Asn Phe Lys Ser Ala Ile Ala Ser Met Ala Asp Arg	
470 475 480 485	
ATC CTG GCA AAT AAA AGC GGC AGA AGG AAT ATG GAT AGC TAT TAGTTGGTC	12664
Ile Leu Ala Asn Lys Ser Gly Arg Arg Asn Met Asp Ser Tyr	
490 495 500	
ATG CCT TTT AAG ACC AGA GGG GCC GAA GAC	12694
Met Pro Phe Lys Thr Arg Gly Ala Glu Asp	
1 5 10	
GCG GCC GCG GGC AAG AAC AGG TTT AAG AAA TCG AGA AAT CGG GAA ATC	12742
Ala Ala Ala Gly Lys Asn Arg Phe Lys Lys Ser Arg Asn Arg Glu Ile	
15 20 25	
TTA CCG ACC AGA CTG CGT GGC ACC GGT AAG AAA ACT GCC GGA TTG TCC	12790
Leu Pro Thr Arg Leu Arg Gly Thr Gly Lys Lys Thr Ala Gly Leu Ser	
30 35 40	
AAT TAT ACC CAG CCT ATT CCC TGG AAC CCT AAA TTC TGC AGC GCG CGC	12838
Asn Tyr Thr Gln Pro Ile Pro Trp Asn Pro Lys Phe Cys Ser Ala Arg	
45 50 55	
GGG GAA TCT GAC AAC CAC GCG TGT AAA GAC ACT TTT TAT CGC AGG ACG	12886
Gly Glu Ser Asp Asn His Ala Cys Lys Asp Thr Phe Tyr Arg Arg Thr	
60 65 70	
TGC TGC GCA TCG CGC TCT ACC GTT TCC AGT CAA CCC GAT TCC CCC CAC	12934
Cys Cys Ala Ser Arg Ser Thr Val Ser Ser Gln Pro Asp Ser Pro His	
75 80 85 90	
ACA CCC ATG CCT ACT GAG TAT GGG CGC GTG CCC TCC GCA AAG CGC AAA	12982
Thr Pro Met Pro Thr Glu Tyr Gly Arg Val Pro Ser Ala Lys Arg Lys	
95 100 105	
AAA CTA TCA TCT TCA GAC TSS GAG GGC GCG CAC CAA CCC CTA GTA TCC	13030
Lys Leu Ser Ser Ser Asp Xaa Glu Gly Ala His Gln Pro Leu Val Ser	
110 115 120	
TGT AAA CTT CCG GAT TCT CAA GCA GCA CCG GCG CGA ACC TAT AGT TCT	13078
Cys Lys Leu Pro Asp Ser Gln Ala Ala Pro Ala Arg Thr Tyr Ser Ser	
125 130 135	
GCG CAA AGA TAT ACT GTT GAC GAG GTT TCG TCG CCA ACT CCG CCA GGC	13126
Ala Gln Arg Tyr Thr Val Asp Glu Val Ser Ser Pro Thr Pro Pro Gly	
140 145 150	
GTC GAC GCT GTT GCG GAC TTA GAA ACG CGC GCG GAA CTT CCT GGC GCT	13174
Val Asp Ala Val Ala Asp Leu Glu Thr Arg Ala Glu Leu Pro Gly Ala	
155 160 165 170	

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ACG	ACG	GAA	CAA	ACG	GAA	AGT	AAA	AAT	AAG	CTC	CCC	AAC	CAA	CAA	TCG	13222
Thr	Thr	Glu	Gln	Thr	Glu	Ser	Lys	Asn	Lys	Leu	Pro	Asn	Gln	Gln	Ser	
				175						180					185	
CGC	CTG	AAG	CCG	AAA	CCC	ACA	AAC	GAG	CAC	GTC	GGA	GGG	GAG	CGG	TGC	13270
Arg	Leu	Lys	Pro	Lys	Pro	Thr	Asn	Glu	His	Val	Gly	Gly	Glu	Arg	Cys	
			190					195					200			
CCC	TCC	GAA	GGC	ACG	GTC	GAG	GCG	CCA	TCG	CTC	GGC	ATC	CTC	TCG	CGC	13318
Pro	Ser	Glu	Gly	Thr	Val	Glu	Ala	Pro	Ser	Leu	Gly	Ile	Leu	Ser	Arg	
		205					210					215				
GTC	GGG	GCA	GCG	ATA	GCA	AAC	GAG	CTG	GCT	CGT	ATG	CGG	AGG	GCG	TGT	13366
Val	Gly	Ala	Ala	Ile	Ala	Asn	Glu	Leu	Ala	Arg	Met	Arg	Arg	Ala	Cys	
		220				225				230						
CTT	CCG	CTC	GCC	GCG	TCG	GCG	GCC	GCT	GCC	GGA	ATA	GTG	GCC	TGG	GCC	13414
Leu	Pro	Leu	Ala	Ala	Ser	Ala	Ala	Ala	Ala	Gly	Ile	Val	Ala	Trp	Ala	
235				240						245				250		
CGC	GCG	AGG	GCC	TTG	CAG	AAA	CAA	GGG	CGG	TAG	CAGTAATAATA	ACCACACAA				13467
Ala	Ala	Arg	Ala	Leu	Gln	Lys	Gln	Gly	Arg	*						
			255					260								
ATATTG																13473

## (2) INFORMATION FOR SEQ ID NO:2:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 476 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: protein

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Met	Arg	Phe	Arg	Arg	Ile	Cys	Ser	Arg	Ser	Arg	Ala	Glu	Lys	Arg	Arg	
1					5				10					15		
Arg	Thr	Thr	Glu	Asn	Pro	Leu	Thr	Ser	Lys	Arg	Val	Cys	Val	Leu	Asp	
			20					25				30				
Ser	Phe	Ser	Arg	Thr	Met	Ser	Leu	Arg	Pro	Tyr	Ala	Glu	Ile	Leu	Pro	
		35				40						45				
Thr	Ala	Glu	Gly	Val	Glu	Arg	Leu	Ala	Glu	Leu	Val	Ser	Val	Thr	Met	
	50					55					60					
Thr	Glu	Arg	Ala	Glu	Pro	Val	Thr	Glu	Asn	Thr	Ala	Val	Asn	Ser	Ile	
65				70					75					80		
Pro	Pro	Ala	Asn	Glu	Asn	Gly	Gln	Asn	Phe	Ala	Tyr	Ala	Gly	Asp	Gly	
			85					90					95			
Pro	Ser	Thr	Thr	Glu	Lys	Val	Asp	Gly	Ser	His	Thr	Asp	Phe	Asp	Glu	
		100					105					110				
Ala	Ser	Ser	Asp	Tyr	Ala	Gly	Pro	Val	Pro	Leu	Ala	Gln	Thr	Arg	Leu	
	115					120						125				
Lys	His	Ser	Asp	Glu	Phe	Leu	Gln	His	Phe	Arg	Val	Leu	Asp	Asp	Leu	
	130					135					140					
Val	Glu	Gly	Ala	Tyr	Gly	Phe	Ile	Cys	Gly	Val	Arg	Arg	Tyr	Thr	Glu	
145				150					155					160		
Glu	Glu	Gln	Arg	Arg	Arg	Gly	Val	Asn	Ser	Thr	Asn	Gln	Gly	Lys	Ser	
			165					170					175			
Lys	Cys	Lys	Arg	Leu	Ile	Ala	Lys	Tyr	Val	Lys	Asn	Gly	Thr	Arg	Ala	
		180					185						190			
Ala	Ser	Gln	Leu	Glu	Asn	Glu	Ile	Leu	Val	Leu	Gly	Arg	Leu	Asn	His	
	195					200					205					
Glu	Asn	Val	Leu	Lys	Ile	Gln	Glu	Ile	Leu	Arg	Tyr	Pro	Asp	Asn	Thr	

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210	215	220
Tyr Met Leu Thr Gln Arg Tyr Gln Phe Asp Leu Tyr Ser Tyr Met Tyr		
225	230	235 240
Asp Glu Ala Phe Asp Trp Lys Asp Ser Pro Met Leu Lys Gln Thr Arg		
	245	250 255
Arg Ile Met Lys Gln Leu Met Ser Ala Val Ser Tyr Ile His Ser Lys		
	260	265 270
Lys Leu Ile His Arg Asp Ile Lys Leu Glu Asn Ile Phe Leu Asn Cys		
	275	280 285
Asp Gly Lys Thr Val Leu Gly Asp Phe Gly Thr Val Thr Pro Phe Glu		
	290	295 300
Asn Glu Arg Glu Pro Phe Glu Tyr Gly Trp Val Gly Thr Val Ala Thr		
	305	310 315 320
Asn Ser Pro Glu Ile Leu Ala Arg Asp Ser Tyr Cys Glu Ile Thr Asp		
	325	330 335
Ile Trp Ser Cys Gly Val Val Leu Leu Glu Met Val Ser His Glu Phe		
	340	345 350
Cys Pro Ile Gly Asp Gly Gly Gly Asn Pro His Gln Gln Leu Leu Lys		
	355	360 365
Val Ile Asp Ser Leu Ser Val Cys Asp Glu Glu Phe Pro Asp Pro Pro		
	370	375 380
Cys Asn Leu Tyr Asn Tyr Leu His Tyr Ala Ser Ile Asp Arg Ala Gly		
	385	390 395 400
His Thr Val Pro Ser Leu Ile Arg Asn Leu His Leu Pro Ala Asp Val		
	405	410 415
Glu Tyr Pro Leu Val Lys Met Leu Thr Phe Asp Trp Arg Leu Arg Pro		
	420	425 430
Ser Ala Ala Glu Val Leu Ala Met Pro Leu Phe Ser Ala Glu Glu Glu		
	435	440 445
Arg Thr Ile Thr Ile Ile His Gly Lys His Lys Pro Ile Arg Pro Glu		
	450	455 460
Ile Arg Ala Arg Val Pro Arg Ser Met Ser Glu Gly		
	465	470 475

## (2) INFORMATION FOR SEQ ID NO:3:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 510 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: protein

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

Met Thr Leu Pro His Arg Leu Thr Lys Arg Pro Phe Ala Arg Arg Phe		
1	5	10 15
Cys Ser Val Phe Val Ile His Tyr Ser Glu Thr Lys Leu Asp Arg Tyr		
	20	25 30
Asn Lys Thr Met Leu Leu Tyr Arg Pro Asp Ser Thr Met Arg His Ser		
	35	40 45
Gly Gly Asp Ala Asn His Arg Gly Ile Arg Pro Arg Arg Lys Ser Ile		
	50	55 60
Gly Ala Phe Ser Ala Arg Glu Lys Thr Gly Lys Arg Asn Ala Leu Thr		
	65	70 75 80
Glu Ser Ser Ser Ser Ser Asp Met Leu Asp Pro Phe Ser Thr Asp Lys		
	85	90 95

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Glu Phe Gly Gly Lys Trp Thr Val Asp Gly Pro Ala Asp Ile Thr Ala  
 100 105 110  
 Glu Val Leu Ser Gln Ala Trp Asp Val Leu Gln Leu Val Lys His Glu  
 115 120 125  
 Asp Ala Glu Glu Glu Arg Val Thr Tyr Glu Ser Lys Pro Thr Pro Ile  
 130 135 140  
 Gln Pro Phe Asn Ala Trp Pro Asp Gly Pro Ser Trp Asn Ala Gln Asp  
 145 150 155 160  
 Phe Thr Arg Ala Pro Ile Val Tyr Pro Ser Ala Glu Val Leu Asp Ala  
 165 170 175  
 Glu Ala Leu Lys Val Gly Ala Phe Val Ser Arg Val Leu Gln Cys Val  
 180 185 190  
 Pro Phe Thr Arg Ser Lys Lys Ser Val Thr Val Arg Asp Ala Gln Ser  
 195 200 205  
 Phe Leu Gly Asp Ser Phe Trp Arg Ile Met Gln Asn Val Tyr Thr Val  
 210 215 220  
 Cys Leu Arg Gln His Ile Thr Arg Leu Arg His Pro Ser Ser Lys Ser  
 225 230 235 240  
 Ile Val Asn Cys Asn Asp Pro Leu Trp Tyr Ala Tyr Ala Asn Gln Phe  
 245 250 255  
 His Trp Arg Gly Met Arg Val Pro Ser Leu Lys Leu Ala Ser Pro Pro  
 260 265 270  
 Glu Glu Asn Ile Gln His Gly Pro Met Ala Ala Val Phe Arg Asn Ala  
 275 280 285  
 Gly Ala Gly Leu Phe Leu Trp Pro Ala Met Arg Ala Ala Phe Glu Glu  
 290 295 300  
 Arg Asp Lys Arg Leu Leu Arg Ala Cys Leu Ser Ser Leu Asp Ile Met  
 305 310 315 320  
 Asp Ala Ala Val Leu Ala Ser Phe Pro Phe Tyr Trp Arg Gly Val Gln  
 325 330 335  
 Asp Thr Ser Arg Phe Glu Pro Ala Leu Gly Cys Leu Ser Glu Tyr Phe  
 340 345 350  
 Ala Leu Val Val Leu Leu Ala Glu Thr Val Leu Ala Thr Met Phe Asp  
 355 360 365  
 His Ala Leu Val Phe Met Arg Ala Leu Ala Asp Gly Asn Phe Asp Asp  
 370 375 380  
 Tyr Asp Glu Thr Arg Tyr Ile Asp Pro Val Lys Asn Glu Tyr Leu Asn  
 385 390 395 400  
 Gly Ala Glu Gly Thr Leu Leu Arg Gly Ile Val Ala Ser Asn Thr Ala  
 405 410 415  
 Leu Ala Val Val Cys Ala Asn Thr Tyr Ser Thr Ile Arg Lys Leu Pro  
 420 425 430  
 Ser Val Ala Thr Ser Ala Cys Asn Val Ala Tyr Arg Thr Glu Thr Leu  
 435 440 445  
 Lys Ala Arg Arg Pro Gly Met Ser Asp Ile Tyr Arg Ile Leu Gln Lys  
 450 455 460  
 Glu Phe Phe Phe Tyr Ile Ala Trp Leu Gln Arg Val Ala Thr His Ala  
 465 470 475 480  
 Asn Phe Cys Leu Asn Ile Leu Lys Arg Ser Val Asp Thr Gly Pro Arg  
 485 490 495  
 His Phe Cys Ser Gly Pro Ala Arg Arg Ser Gly Cys Ser Ser  
 500 505 510

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## (2) INFORMATION FOR SEQ ID NO:4:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 110 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: protein

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

```

Met Leu Cys Pro Leu Leu Val Pro Ile Gln Tyr Glu Asp Phe Ser Lys
 1             5             10             15
Ala Met Gly Ser Glu Leu Lys Arg Glu Lys Leu Glu Thr Phe Val Lys
          20             25             30
Ala Ile Ser Ser Asp Arg Asp Pro Arg Gly Ser Leu Arg Phe Leu Ile
          35             40             45
Ser Asp His Ala Arg Glu Ile Ile Ala Asp Gly Val Arg Phe Lys Pro
          50             55             60
Val Ile Asp Glu Pro Val Arg Ala Ser Val Ala Leu Ser Thr Ala Ala
          65             70             75             80
Ala Gly Lys Val Lys Ala Arg Arg Leu Thr Ser Val Arg Ala Pro Val
          85             90             95
Pro Pro Ala Gly Ala Val Ser Ala Arg Lys Ser Glu Ile
          100             105             110

```

## (2) INFORMATION FOR SEQ ID NO:5:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 292 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: protein

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

```

Met Ser Gly Phe Ser Asn Ile Gly Ser Ile Ala Thr Val Ser Leu Val
 1             5             10             15
Cys Ser Leu Leu Cys Ala Ser Val Leu Gly Ala Pro Val Leu Asp Gly
          20             25             30
Leu Glu Ser Ser Pro Phe Pro Phe Gly Gly Lys Ile Ile Ala Gln Ala
          35             40             45
Cys Asn Arg Thr Thr Ile Glu Val Thr Val Pro Trp Ser Asp Tyr Ser
          50             55             60
Gly Arg Thr Glu Gly Val Ser Val Glu Val Lys Trp Phe Tyr Gly Asn
          65             70             75             80
Ser Asn Pro Glu Ser Phe Val Phe Gly Val Asp Ser Glu Thr Gly Ser
          85             90             95
Gly His Glu Asp Leu Ser Thr Cys Trp Ala Leu Ile His Asn Leu Asn
          100             105             110
Ala Ser Val Cys Arg Ala Ser Asp Ala Gly Ile Pro Asp Phe Asp Lys
          115             120             125
Gln Cys Glu Lys Val Gln Arg Arg Leu Arg Ser Gly Val Glu Leu Gly
          130             135             140
Ser Tyr Val Ser Gly Asn Gly Ser Leu Val Leu Tyr Pro Gly Met Tyr
          145             150             155             160
Asp Ala Gly Ile Tyr Ala Tyr Gln Leu Ser Val Gly Gly Lys Gly Tyr
          165             170             175
Thr Gly Ser Val Tyr Leu Asp Val Gly Pro Asn Pro Gly Cys His Asp

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180					185					190						
Gln	Tyr	Gly	Tyr	Thr	Tyr	Tyr	Ser	Leu	Ala	Asp	Glu	Ala	Ser	Asp	Leu	
195					200					205						
Ser	Ser	Tyr	Asp	Val	Ala	Ser	Pro	Glu	Leu	Asp	Gly	Pro	Met	Glu	Glu	
210					215					220						
Asp	Tyr	Ser	Asn	Cys	Leu	Asp	Met	Pro	Pro	Leu	Arg	Pro	Trp	Thr	Thr	
225					230					235					240	
Val	Cys	Ser	His	Asp	Val	Glu	Glu	Gln	Glu	Asn	Ala	Thr	Asp	Glu	Leu	
245					250					255						
Tyr	Leu	Trp	Asp	Glu	Glu	Cys	Ala	Gly	Pro	Leu	Asp	Glu	Tyr	Val	Asp	
260					265					270						
Glu	Arg	Ser	Glu	Thr	Met	Pro	Arg	Met	Val	Val	Phe	Ser	Pro	Pro	Ser	
275					280					285						
Thr	Leu	Gln	Gln													
290																

## (2) INFORMATION FOR SEQ ID NO:6:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 985 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: protein

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

Met	Gly	Thr	Met	Leu	Val	Leu	Arg	Leu	Phe	Leu	Leu	Ala	Val	Ala	Asp
1				5					10					15	
Ala	Ala	Leu	Pro	Thr	Gly	Arg	Phe	Cys	Arg	Val	Trp	Lys	Val	Pro	Pro
			20					25					30		
Gly	Gly	Thr	Ile	Gln	Glu	Asn	Leu	Ala	Val	Leu	Ala	Glu	Ser	Pro	Val
		35				40						45			
Thr	Gly	His	Ala	Thr	Tyr	Pro	Pro	Pro	Glu	Gly	Ala	Val	Ser	Phe	Gln
		50				55					60				
Ile	Phe	Ala	Asp	Thr	Pro	Thr	Leu	Arg	Ile	Arg	Tyr	Gly	Pro	Thr	Glu
	65				70				75					80	
Asp	Glu	Leu	Ala	Leu	Glu	Arg	Gly	Thr	Ser	Ala	Ser	Asp	Ala	Asp	Asn
			85					90					95		
Val	Thr	Phe	Ser	Leu	Ser	Tyr	Arg	Pro	Arg	Pro	Glu	Ile	His	Gly	Ala
		100					105						110		
Tyr	Phe	Thr	Ile	Gly	Val	Phe	Ala	Thr	Gly	Gln	Ser	Thr	Glu	Ser	Ser
		115					120					125			
Tyr	Ser	Val	Ile	Ser	Arg	Val	Leu	Val	Asn	Ala	Ser	Leu	Glu	Arg	Ser
		130				135					140				
Val	Arg	Leu	Glu	Thr	Pro	Cys	Asp	Glu	Asn	Phe	Leu	Gln	Asn	Glu	Pro
	145				150					155				160	
Thr	Trp	Gly	Ser	Lys	Arg	Trp	Leu	Gly	Pro	Pro	Ser	Pro	Tyr	Val	Arg
			165				170						175		
Asp	Asn	Asp	Val	Ala	Val	Leu	Thr	Lys	Ala	Gln	Tyr	Ile	Gly	Glu	Cys
			180				185					190			
Tyr	Ser	Asn	Ser	Ala	Ala	Gln	Thr	Gly	Leu	Thr	Ser	Leu	Asn	Met	Thr
		195				200					205				
Phe	Phe	Tyr	Ser	Pro	Lys	Arg	Ile	Val	Asn	Val	Thr	Trp	Thr	Thr	Gly
	210					215					220				
Gly	Pro	Ser	Pro	Ser	Arg	Ile	Thr	Val	Tyr	Ser	Ser	Arg	Glu	Asn	Gly
	225				230				235					240	

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Gln Pro Val Leu Arg Asn Val Ser Asp Gly Phe Leu Val Lys Tyr Thr  
 245 250 255  
 Pro Asp Ile Asp Gly Arg Ala Met Ile Asn Val Ile Ala Asn Tyr Ser  
 260 265 270  
 Pro Ala Asp Ser Gly Ser Val Leu Ala Phe Thr Ala Phe Arg Glu Gly  
 275 280 285  
 Lys Leu Pro Ser Ala Ile Gln Leu His Arg Ile Asp Met Ser Gly Thr  
 290 295 300  
 Glu Pro Pro Gly Thr Glu Thr Thr Phe Asp Cys Gln Lys Met Ile Glu  
 305 310 315 320  
 Thr Pro Tyr Arg Ala Leu Gly Ser Asn Val Pro Arg Asp Asp Ser Ile  
 325 330 335  
 Arg Pro Gly Ala Thr Leu Pro Pro Phe Asp Thr Ala Ala Pro Asp Phe  
 340 345 350  
 Asp Thr Gly Thr Ser Pro Thr Pro Thr Thr Val Pro Glu Pro Ala Ile  
 355 360 365  
 Thr Thr Leu Ile Pro Arg Ser Thr Ser Asp Met Gly Phe Phe Ser Thr  
 370 375 380  
 Ala Arg Ala Thr Gly Ser Glu Thr Leu Ser Val Pro Val Gln Glu Thr  
 385 390 395 400  
 Asp Arg Thr Leu Ser Thr Thr Pro Leu Thr Leu Pro Leu Thr Pro Gly  
 405 410 415  
 Glu Ser Glu Asn Thr Leu Phe Pro Thr Thr Ala Pro Gly Ile Ser Thr  
 420 425 430  
 Glu Thr Pro Ser Ala Ala His Glu Thr Thr Gln Thr Gln Ser Ala Glu  
 435 440 445  
 Thr Val Val Phe Thr Gln Ser Pro Ser Thr Glu Ser Glu Thr Ala Arg  
 450 455 460  
 Ser Gln Ser Gln Glu Pro Trp Tyr Phe Thr Gln Thr Pro Ser Thr Glu  
 465 470 475 480  
 Gln Ala Ala Leu Thr Gln Thr Gln Ile Ala Glu Thr Glu Ala Leu Phe  
 485 490 495  
 Thr Gln Thr Pro Ser Ala Glu Gln Met Thr Phe Thr Gln Thr Pro Gly  
 500 505 510  
 Ala Glu Thr Glu Ala Pro Ala Gln Thr Pro Ser Thr Ile Pro Glu Ile  
 515 520 525  
 Phe Thr Gln Ser Arg Ser Thr Pro Pro Glu Thr Ala Arg Ala Pro Ser  
 530 535 540  
 Ala Ala Pro Glu Val Phe Thr Gln Ser Ser Ser Thr Val Thr Glu Val  
 545 550 555 560  
 Phe Thr Gln Thr Pro Ser Thr Val Pro Lys Thr Thr Leu Ser Ser Ser  
 565 570 575  
 Thr Glu Pro Ala Ile Phe Thr Arg Thr Gln Ser Ala Gly Thr Glu Ala  
 580 585 590  
 Phe Thr Gln Thr Ser Ser Ala Glu Pro Asp Thr Met Arg Thr Gln Ser  
 595 600 605  
 Thr Glu Thr His Phe Phe Thr Gln Ala Pro Ser Thr Val Pro Lys Ala  
 610 615 620  
 Thr Gln Thr Pro Ser Thr Glu Pro Glu Val Leu Thr Gln Ser Pro Ser  
 625 630 635 640  
 Thr Glu Pro Val Pro Phe Thr Arg Thr Leu Gly Ala Glu Pro Glu Ile  
 645 650 655

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Thr	Gln	Thr	Pro	Ser	Ala	Ala	Pro	Glu	Val	Tyr	Thr	Arg	Ser	Ser	Ser				
			660					665					670						
Thr	Met	Pro	Glu	Thr	Ala	Gln	Ser	Thr	Pro	Leu	Ala	Ser	Gln	Asn	Pro				
		675					680					685							
Thr	Ser	Ser	Gly	Thr	Gly	Thr	His	Asn	Thr	Glu	Pro	Arg	Thr	Tyr	Pro				
	690					695					700								
Val	Gln	Thr	Thr	Pro	His	Thr	Gln	Lys	Leu	Tyr	Thr	Glu	Asn	Lys	Thr				
705					710					715					720				
Leu	Ser	Phe	Pro	Thr	Val	Val	Ser	Glu	Phe	His	Glu	Met	Ser	Thr	Ala				
				725					730						735				
Glu	Ser	Gln	Thr	Pro	Leu	Leu	Asp	Val	Lys	Ile	Val	Glu	Val	Lys	Phe				
			740					745					750						
Ser	Asn	Asp	Gly	Glu	Val	Thr	Ala	Thr	Cys	Val	Ser	Thr	Val	Lys	Ser				
		755					760					765							
Pro	Tyr	Arg	Val	Glu	Thr	Asn	Trp	Lys	Val	Asp	Leu	Val	Asp	Val	Met				
	770					775					780								
Asp	Glu	Ile	Ser	Gly	Asn	Ser	Pro	Ala	Gly	Val	Phe	Asn	Ser	Asn	Glu				
785					790					795					800				
Lys	Trp	Gln	Lys	Gln	Leu	Tyr	Tyr	Arg	Val	Thr	Asp	Gly	Arg	Thr	Ser				
				805					810					815					
Val	Gln	Leu	Met	Cys	Leu	Ser	Cys	Thr	Ser	His	Ser	Pro	Glu	Pro	Tyr				
			820					825						830					
Cys	Leu	Phe	Asp	Thr	Ser	Leu	Ile	Ala	Arg	Glu	Lys	Asp	Ile	Ala	Pro				
		835					840					845							
Glu	Leu	Tyr	Phe	Thr	Ser	Asp	Pro	Gln	Thr	Ala	Tyr	Cys	Thr	Ile	Thr				
	850					855					860								
Leu	Pro	Ser	Gly	Val	Val	Pro	Arg	Phe	Glu	Trp	Ser	Leu	Asn	Asn	Val				
865					870					875					880				
Ser	Leu	Pro	Glu	Tyr	Leu	Thr	Ala	Thr	Thr	Val	Val	Ser	His	Thr	Ala				
				885					890					895					
Gly	Gln	Ser	Thr	Val	Trp	Lys	Ser	Ser	Ala	Arg	Ala	Gly	Glu	Ala	Trp				
			900					905					910						
Ile	Ser	Gly	Arg	Gly	Gly	Asn	Ile	Tyr	Glu	Cys	Thr	Val	Leu	Ile	Ser				
		915				920						925							
Asp	Gly	Thr	Arg	Val	Thr	Thr	Arg	Lys	Glu	Arg	Cys	Leu	Thr	Asn	Thr				
	930					935					940								
Trp	Ile	Ala	Val	Glu	Asn	Gly	Ala	Ala	Gln	Ala	Gln	Leu	Tyr	Ser	Leu				
945					950					955					960				
Phe	Ser	Gly	Leu	Val	Ser	Gly	Leu	Cys	Gly	Ser	Ile	Ser	Ala	Leu	Tyr				
				965					970					975					
Ala	Thr	Leu	Trp	Thr	Ala	Ile	Tyr	Phe											
			980				985												

## (2) INFORMATION FOR SEQ ID NO:7:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 362 amino acids  
 (B) TYPE: amino acid  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

Met	Ala	Ser	Leu	Leu	Gly	Thr	Leu	Ala	Leu	Leu	Ala	Ala	Thr	Leu	Ala				
1				5					10						15				

Pro Phe Gly Ala Met Gly Ile Val Ile Thr Gly Asn His Val Ser Ala



[illegible]

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 499 amino acids  
(B) TYPE: amino acid  
(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

Met Asn Met Leu Val Ile Val Leu Ala Ser Cys Leu Ala Arg Leu Thr  
1 5 10 15

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Phe Ala Thr Arg His Val Leu Phe Leu Glu Gly Thr Gln Ala Val Leu  
 20 25 30  
 Gly Glu Asp Asp Pro Arg Asn Val Pro Glu Gly Thr Val Ile Lys Trp  
 35 40 45  
 Thr Lys Val Leu Arg Asn Ala Cys Lys Met Lys Ala Ala Asp Val Cys  
 50 55 60  
 Ser Ser Pro Asn Tyr Cys Phe His Asp Leu Ile Tyr Asp Gly Gly Lys  
 65 70 75 80  
 Lys Asp Cys Pro Pro Ala Gly Pro Leu Ser Ala Asn Leu Val Ile Leu  
 85 90 95  
 Leu Lys Arg Gly Glu Ser Phe Val Val Leu Gly Ser Gly Leu His Asn  
 100 105 110  
 Ser Asn Ile Thr Asn Ile Met Trp Thr Glu Tyr Gly Gly Leu Leu Phe  
 115 120 125  
 Asp Pro Val Thr Arg Ser Asp Glu Gly Ile Tyr Phe Arg Arg Ile Ser  
 130 135 140  
 Gln Pro Asp Leu Ala Met Glu Thr Thr Ser Tyr Asn Val Ser Val Leu  
 145 150 155 160  
 Ser His Val Asp Glu Lys Ala Pro Ala Pro His Glu Val Glu Ile Asp  
 165 170 175  
 Thr Ile Lys Pro Ser Glu Ala His Ala His Val Glu Leu Gln Met Leu  
 180 185 190  
 Pro Phe His Glu Leu Asn Asp Asn Ser Pro Thr Tyr Val Thr Pro Val  
 195 200 205  
 Leu Arg Val Phe Pro Pro Thr Glu His Val Lys Phe Asn Val Thr Tyr  
 210 215 220  
 Ser Trp Tyr Gly Phe Asp Val Lys Glu Glu Cys Glu Glu Val Lys Leu  
 225 230 235 240  
 Phe Glu Pro Cys Val Tyr His Pro Thr Asp Gly Lys Cys Gln Phe Pro  
 245 250 255  
 Ala Thr Asn Gln Arg Cys Leu Ile Gly Ser Val Leu Met Ala Glu Phe  
 260 265 270  
 Leu Gly Ala Ala Ser Leu Leu Asp Cys Ser Arg Asp Thr Leu Glu Asp  
 275 280 285  
 Cys His Glu Asn Arg Val Pro Asn Leu Arg Phe Asp Ser Arg Leu Ser  
 290 295 300  
 Glu Ser Arg Ala Gly Leu Val Ile Ser Pro Leu Ile Ala Ile Pro Lys  
 305 310 315 320  
 Val Leu Ile Ile Val Val Ser Asp Gly Asp Ile Leu Gly Trp Ser Tyr  
 325 330 335  
 Thr Val Leu Gly Lys Arg Asn Ser Pro Arg Val Val Val Glu Thr His  
 340 345 350  
 Met Pro Ser Lys Val Pro Met Asn Lys Val Val Ile Gly Ser Pro Gly  
 355 360 365  
 Pro Met Asp Glu Thr Gly Asn Tyr Lys Met Tyr Phe Val Val Ala Gly  
 370 375 380  
 Val Ala Ala Thr Cys Val Ile Leu Thr Cys Ala Leu Leu Val Gly Lys  
 385 390 395 400  
 Lys Lys Cys Pro Ala His Gln Met Gly Thr Phe Ser Lys Thr Glu Pro  
 405 410 415  
 Leu Tyr Ala Pro Leu Pro Lys Asn Glu Phe Glu Ala Gly Gly Leu Thr  
 420 425 430

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Asp Asp Glu Val Ile Tyr Asp Glu Val Tyr Glu Pro Leu Phe Arg  
 435 440 445  
 Gly Tyr Cys Lys Gln Glu Phe Arg Glu Asp Val Asn Thr Phe Phe Gly  
 450 455 460  
 Ala Val Val Glu Gly Glu Arg Ala Leu Asn Phe Lys Ser Ala Ile Ala  
 465 470 475 480  
 Ser Met Ala Asp Arg Ile Leu Ala Asn Lys Ser Gly Arg Arg Asn Met  
 485 490 495  
 Asp Ser Tyr

## (2) INFORMATION FOR SEQ ID NO:9:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 260 amino acids  
 (B) TYPE: amino acid  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

Met Pro Phe Lys Thr Arg Gly Ala Glu Asp Ala Ala Ala Gly Lys Asn  
 1 5 10 15  
 Arg Phe Lys Lys Ser Arg Asn Arg Glu Ile Leu Pro Thr Arg Leu Arg  
 20 25 30  
 Gly Thr Gly Lys Lys Thr Ala Gly Leu Ser Asn Tyr Thr Gln Pro Ile  
 35 40 45  
 Pro Trp Asn Pro Lys Phe Cys Ser Ala Arg Gly Glu Ser Asp Asn His  
 50 55 60  
 Ala Cys Lys Asp Thr Phe Tyr Arg Arg Thr Cys Cys Ala Ser Arg Ser  
 65 70 75 80  
 Thr Val Ser Ser Gln Pro Asp Ser Pro His Thr Pro Met Pro Thr Glu  
 85 90 95  
 Tyr Gly Arg Val Pro Ser Ala Lys Arg Lys Lys Leu Ser Ser Ser Asp  
 100 105 110  
 Xaa Glu Gly Ala His Gln Pro Leu Val Ser Cys Lys Leu Pro Asp Ser  
 115 120 125  
 Gln Ala Ala Pro Ala Arg Thr Tyr Ser Ser Ala Gln Arg Tyr Thr Val  
 130 135 140  
 Asp Glu Val Ser Ser Pro Thr Pro Pro Gly Val Asp Ala Val Ala Asp  
 145 150 155 160  
 Leu Glu Thr Arg Ala Glu Leu Pro Gly Ala Thr Thr Glu Gln Thr Glu  
 165 170 175  
 Ser Lys Asn Lys Leu Pro Asn Gln Gln Ser Arg Leu Lys Pro Lys Pro  
 180 185 190  
 Thr Asn Glu His Val Gly Gly Glu Arg Cys Pro Ser Glu Gly Thr Val  
 195 200 205  
 Glu Ala Pro Ser Leu Gly Ile Leu Ser Arg Val Gly Ala Ala Ile Ala  
 210 215 220  
 Asn Glu Leu Ala Arg Met Arg Arg Ala Cys Leu Pro Leu Ala Ala Ser  
 225 230 235 240  
 Ala Ala Ala Ala Gly Ile Val Ala Trp Ala Ala Ala Arg Ala Leu Gln  
 245 250 255  
 Lys Gln Gly Arg  
 260

## (2) INFORMATION FOR SEQ ID NO:10:

-continued

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 1305 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

## (ix) FEATURE:

- (A) NAME/KEY: CDS  
 (B) LOCATION: 1..1305

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

ATG CAC CGT CCT CAT CTC AGA CGG CAC TCG CGT TAC TAC GCG AAA GGA	48
Met His Arg Pro His Leu Arg Arg His Ser Arg Tyr Tyr Ala Lys Gly	
1 5 10 15	
GAG GTG CTT AAC AAA CAC ATG GAT TGC GGT GGA AAA CGG TGC TGC TCA	96
Glu Val Leu Asn Lys His Met Asp Cys Gly Gly Lys Arg Cys Cys Ser	
20 25 30	
GGC GCA GCT GTA TTC ACT CTT TTC TGG ACT TGT GTC AGG ATT ATG CGG	144
Gly Ala Ala Val Phe Thr Leu Phe Trp Thr Cys Val Arg Ile Met Arg	
35 40 45	
GAG CAT ATC TGC TTT GTA CGC AAC GCT ATG GAC CGC CAT TTA TTT TTG	192
Glu His Ile Cys Phe Val Arg Asn Ala Met Asp Arg His Leu Phe Leu	
50 55 60	
AGG AAT GCT TTT TGG ACT ATC GTA CTG CTT TCT TCC TTC GCT AGC CAG	240
Arg Asn Ala Phe Trp Thr Ile Val Leu Leu Ser Ser Phe Ala Ser Gln	
65 70 75 80	
AGC ACC GCC GCC GTC ACG TAC GAC TAC ATT TTA GGC CGT CGC GCG CTC	288
Ser Thr Ala Ala Val Thr Tyr Asp Tyr Ile Leu Gly Arg Arg Ala Leu	
85 90 95	
GAC GCG CTA ACC ATA CCG GCG GTT GGC CCG TAT AAC AGA TAC CTC ACT	336
Asp Ala Leu Thr Ile Pro Ala Val Gly Pro Tyr Asn Arg Tyr Leu Thr	
100 105 110	
AGG GTA TCA AGA GGC TGC GAC GTT GTC GAG CTC AAC CCG ATT TCT AAC	384
Arg Val Ser Arg Gly Cys Asp Val Val Glu Leu Asn Pro Ile Ser Asn	
115 120 125	
GTG GAC GAC ATG ATA TCG GCG GCC AAA GAA AAA GAG AAG GGG GGC CCT	432
Val Asp Asp Met Ile Ser Ala Ala Lys Glu Lys Glu Lys Gly Gly Pro	
130 135 140	
TTC GAG GCC TCC GTC GTC TGG TTC TAC GTG ATT AAG GGC GAC GAC GGC	480
Phe Glu Ala Ser Val Val Trp Phe Tyr Val Ile Lys Gly Asp Asp Gly	
145 150 155 160	
GAG GAC AAG TAC TGT CCA ATC TAT AGA AAA GAG TAC AGG GAA TGT GGC	528
Glu Asp Lys Tyr Cys Pro Ile Tyr Arg Lys Glu Tyr Arg Glu Cys Gly	
165 170 175	
GAC GTA CAA CTG CTA TCT GAA TGC GCC GTT CAA TCT GCA CAG ATG TGG	576
Asp Val Gln Leu Leu Ser Glu Cys Ala Val Gln Ser Ala Gln Met Trp	
180 185 190	
GCA GTG GAC TAT GTT CCT AGC ACC CTT GTA TCG CGA AAT GGC GCG GGA	624
Ala Val Asp Tyr Val Pro Ser Thr Leu Val Ser Arg Asn Gly Ala Gly	
195 200 205	
CTG ACT ATA TTC TCC CCC ACT GCT GCG CTC TCT GGC CAA TAC TTG CTG	672
Leu Thr Ile Phe Ser Pro Thr Ala Ala Leu Ser Gly Gln Tyr Leu Leu	
210 215 220	
ACC CTG AAA ATC GGG AGA TTT GCG CAA ACA GCT CTC GTA ACT CTA GAA	720
Thr Leu Lys Ile Gly Arg Phe Ala Gln Thr Ala Leu Val Thr Leu Glu	
225 230 235 240	

-continued

GTT AAC GAT CGC TGT TTA AAG ATC GGG TCG CAG CTT AAC TTT TTA CCG	768
Val Asn Asp Arg Cys Leu Lys Ile Gly Ser Gln Leu Asn Phe Leu Pro	
245 250 255	
TCG AAA TGC TGG ACA ACA GAA CAG TAT CAG ACT GGA TTT CAA GGC GAA	816
Ser Lys Cys Trp Thr Thr Glu Gln Tyr Gln Thr Gly Phe Gln Gly Glu	
260 265 270	
CAC CTT TAT CCG ATC GCA GAC ACC AAT ACA CGA CAC GCG GAC GAC GTA	864
His Leu Tyr Pro Ile Ala Asp Thr Asn Thr Arg His Ala Asp Asp Val	
275 280 285	
TAT CGG GGA TAC GAA GAT ATT CTG CAG CGC TGG AAT AAT TTG CTG AGG	912
Tyr Arg Gly Tyr Glu Asp Ile Leu Gln Arg Trp Asn Asn Leu Leu Arg	
290 295 300	
AAA AAG AAT CCT AGC GCG CCA GAC CCT CGT CCA GAT AGC GTC CCG CAA	960
Lys Lys Asn Pro Ser Ala Pro Asp Pro Arg Pro Asp Ser Val Pro Gln	
305 310 315 320	
GAA ATT CCC GCT GTA ACC AAG AAA GCG GAA GGG CGC ACC CCG GAC GCA	1008
Glu Ile Pro Ala Val Thr Lys Lys Ala Glu Gly Arg Thr Pro Asp Ala	
325 330 335	
GAA AGC AGC GAA AAG AAG GCC CCT CCA GAA GAC TCG GAG GAC GAC ATG	1056
Glu Ser Ser Glu Lys Lys Ala Pro Pro Glu Asp Ser Glu Asp Asp Met	
340 345 350	
CAG GCA GAG GCT TCT GGA GAA AAT CCT GCC GCC CTC CCC GAA GAC GAC	1104
Gln Ala Glu Ala Ser Gly Glu Asn Pro Ala Ala Leu Pro Glu Asp Asp	
355 360 365	
GAA GTC CCC GAG GAC ACC GAG CAC GAT GAT CCA AAC TCG GAT CCT GAC	1152
Glu Val Pro Glu Asp Thr Glu His Asp Asp Pro Asn Ser Asp Pro Asp	
370 375 380	
TAT TAC AAT GAC ATG CCC GCC GTG ATC CCG GTG GAG GAG ACT ACT AAA	1200
Tyr Tyr Asn Asp Met Pro Ala Val Ile Pro Val Glu Glu Thr Thr Lys	
385 390 395 400	
AGT TCT AAT GCC GTC TCC ATG CCC ATA TTC GCG GCG TTC GTA GCC TGC	1248
Ser Ser Asn Ala Val Ser Met Pro Ile Phe Ala Ala Phe Val Ala Cys	
405 410 415	
GCG GTC GCG CTC GTG GGG CTA CTG GTT TGG AGC ATC GTA AAA TGC GCG	1296
Ala Val Ala Leu Val Gly Leu Leu Val Trp Ser Ile Val Lys Cys Ala	
420 425 430	
CGT AGC TAA	1305
Arg Ser	
435	

## (2) INFORMATION FOR SEQ ID NO:11:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 434 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: protein

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Met His Arg Pro His Leu Arg Arg His Ser Arg Tyr Tyr Ala Lys Gly  
 1 5 10 15

Glu Val Leu Asn Lys His Met Asp Cys Gly Gly Lys Arg Cys Cys Ser  
 20 25 30

Gly Ala Ala Val Phe Thr Leu Phe Trp Thr Cys Val Arg Ile Met Arg  
 35 40 45

Glu His Ile Cys Phe Val Arg Asn Ala Met Asp Arg His Leu Phe Leu  
 50 55 60

Arg Asn Ala Phe Trp Thr Ile Val Leu Leu Ser Ser Phe Ala Ser Gln  
 65 70 75 80

-continued

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Ser Thr Ala Ala Val Thr Tyr Asp Tyr Ile Leu Gly Arg Arg Ala Leu
      85                      90                      95
Asp Ala Leu Thr Ile Pro Ala Val Gly Pro Tyr Asn Arg Tyr Leu Thr
      100                      105                      110
Arg Val Ser Arg Gly Cys Asp Val Val Glu Leu Asn Pro Ile Ser Asn
      115                      120                      125
Val Asp Asp Met Ile Ser Ala Ala Lys Glu Lys Glu Lys Gly Gly Pro
      130                      135                      140
Phe Glu Ala Ser Val Val Trp Phe Tyr Val Ile Lys Gly Asp Asp Gly
      145                      150                      155                      160
Glu Asp Lys Tyr Cys Pro Ile Tyr Arg Lys Glu Tyr Arg Glu Cys Gly
      165                      170                      175
Asp Val Gln Leu Leu Ser Glu Cys Ala Val Gln Ser Ala Gln Met Trp
      180                      185                      190
Ala Val Asp Tyr Val Pro Ser Thr Leu Val Ser Arg Asn Gly Ala Gly
      195                      200                      205
Leu Thr Ile Phe Ser Pro Thr Ala Ala Leu Ser Gly Gln Tyr Leu Leu
      210                      215                      220
Thr Leu Lys Ile Gly Arg Phe Ala Gln Thr Ala Leu Val Thr Leu Glu
      225                      230                      235                      240
Val Asn Asp Arg Cys Leu Lys Ile Gly Ser Gln Leu Asn Phe Leu Pro
      245                      250                      255
Ser Lys Cys Trp Thr Thr Glu Gln Tyr Gln Thr Gly Phe Gln Gly Glu
      260                      265                      270
His Leu Tyr Pro Ile Ala Asp Thr Asn Thr Arg His Ala Asp Asp Val
      275                      280                      285
Tyr Arg Gly Tyr Glu Asp Ile Leu Gln Arg Trp Asn Asn Leu Leu Arg
      290                      295                      300
Lys Lys Asn Pro Ser Ala Pro Asp Pro Arg Pro Asp Ser Val Pro Gln
      305                      310                      315                      320
Glu Ile Pro Ala Val Thr Lys Lys Ala Glu Gly Arg Thr Pro Asp Ala
      325                      330                      335
Glu Ser Ser Glu Lys Lys Ala Pro Pro Glu Asp Ser Glu Asp Asp Met
      340                      345                      350
Gln Ala Glu Ala Ser Gly Glu Asn Pro Ala Ala Leu Pro Glu Asp Asp
      355                      360                      365
Glu Val Pro Glu Asp Thr Glu His Asp Asp Pro Asn Ser Asp Pro Asp
      370                      375                      380
Tyr Tyr Asn Asp Met Pro Ala Val Ile Pro Val Glu Glu Thr Thr Lys
      385                      390                      395                      400
Ser Ser Asn Ala Val Ser Met Pro Ile Phe Ala Ala Phe Val Ala Cys
      405                      410                      415
Ala Val Ala Leu Val Gly Leu Leu Val Trp Ser Ile Val Lys Cys Ala
      420                      425                      430
Arg Ser

```

## (2) INFORMATION FOR SEQ ID NO:12:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 690 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: DNA (genomic)

-continued

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(ix) FEATURE:

(A) NAME/KEY: CDS

(B) LOCATION: 1..689

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

ATG GCG CCT GTA AAA GTG ACT ATA GTT TCT GCG GTC GAT TCG CAC TAC	48
Met Ala Pro Val Lys Val Thr Ile Val Ser Ala Val Asp Ser His Tyr	
1 5 10 15	
AAA CTA CCT AAT TCT AGA TTT GAG CTC TCG GAT TCT GGA TGG AAA GAA	96
Lys Leu Pro Asn Ser Arg Phe Glu Leu Ser Asp Ser Gly Trp Lys Glu	
20 25 30	
TTG GTT CAC GCA GTG AAA ACT ATG GCG AGT TAC GAT CGT CCG AGT ACA	144
Leu Val His Ala Val Lys Thr Met Ala Ser Tyr Asp Arg Pro Ser Thr	
35 40 45	
TTA TCG GTA ATC GTG CGC CCG GCA TCT CTG TAC GAA GTT TCC GGG GAG	192
Leu Ser Val Ile Val Arg Pro Ala Ser Leu Tyr Glu Val Ser Gly Glu	
50 55 60	
CTG TTT TCC CTT CCC AGG ATG TGC AGA CCC GTG ATT CGG TTC GGT GAG	240
Leu Phe Ser Leu Pro Arg Met Cys Arg Pro Val Ile Arg Phe Gly Glu	
65 70 75 80	
GGG GGC GAC CCG CCT GGA GTA AGT CCC GAG TGG AGC GGC TTG GAC GCA	288
Gly Gly Asp Pro Pro Gly Val Ser Pro Glu Trp Ser Gly Leu Asp Ala	
85 90 95	
GGG TTT TAC CAT TTG TCA TCT GGC GCG TAT GCC GCA AAA GAG TTC CAT	336
Gly Phe Tyr His Leu Ser Ser Gly Ala Tyr Ala Ala Lys Glu Phe His	
100 105 110	
TTG TGG GTG CTG GGT ACC GCT GAC ATA TGC ATG GCA GCT TTA AAC CTC	384
Leu Trp Val Leu Gly Thr Ala Asp Ile Cys Met Ala Ala Leu Asn Leu	
115 120 125	
CCT GCG CCA AAA ACT TTC CTA ATT ACC GAA ACC GGA GGT AAA AAT TTT	432
Pro Ala Pro Lys Thr Phe Leu Ile Thr Glu Thr Gly Gly Lys Asn Phe	
130 135 140	
GAG AGA GGA GTG GAA ATA TTT TTG GTA AAC GGA GAC AAG ACA ACG CTG	480
Glu Arg Gly Val Glu Ile Phe Leu Val Asn Gly Asp Lys Thr Thr Leu	
145 150 155 160	
TCT CTG AGT CAC CCA TCA GTC TGG ACA ACT CTT GCC CCT TCG AGC CTG	528
Ser Leu Ser His Pro Ser Val Trp Thr Thr Leu Ala Pro Ser Ser Leu	
165 170 175	
AGA ACG CCC TGG CCG TAC AGC ACG GTA AAG TTT TTA AAA GTA AAA CCT	576
Arg Thr Pro Trp Pro Tyr Ser Thr Val Lys Phe Leu Lys Val Lys Pro	
180 185 190	
AAC TCG GCC GCA TAC TGT GTT TCC GAC TCG GAT GAT GGC GAA CGG CAG	624
Asn Ser Ala Ala Tyr Cys Val Ser Asp Ser Asp Asp Gly Glu Arg Gln	
195 200 205	
CCA AAA TTT TTT CTC GGG AGT CTA TTT AAG TCG AAG AAA CCC CGC TCC	672
Pro Lys Phe Phe Leu Gly Ser Leu Phe Lys Ser Lys Lys Pro Arg Ser	
210 215 220	
CCG CGG CGC CGA CGT TA G	690
Pro Arg Arg Arg Arg	
225	

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 229 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

-continued

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

```

Met Ala Pro Val Lys Val Thr Ile Val Ser Ala Val Asp Ser His Tyr
 1           5           10           15
Lys Leu Pro Asn Ser Arg Phe Glu Leu Ser Asp Ser Gly Trp Lys Glu
          20           25           30
Leu Val His Ala Val Lys Thr Met Ala Ser Tyr Asp Arg Pro Ser Thr
          35           40           45
Leu Ser Val Ile Val Arg Pro Ala Ser Leu Tyr Glu Val Ser Gly Glu
          50           55           60
Leu Phe Ser Leu Pro Arg Met Cys Arg Pro Val Ile Arg Phe Gly Glu
          65           70           75           80
Gly Gly Asp Pro Pro Gly Val Ser Pro Glu Trp Ser Gly Leu Asp Ala
          85           90           95
Gly Phe Tyr His Leu Ser Ser Gly Ala Tyr Ala Ala Lys Glu Phe His
          100          105          110
Leu Trp Val Leu Gly Thr Ala Asp Ile Cys Met Ala Ala Leu Asn Leu
          115          120          125
Pro Ala Pro Lys Thr Phe Leu Ile Thr Glu Thr Gly Gly Lys Asn Phe
          130          135          140
Glu Arg Gly Val Glu Ile Phe Leu Val Asn Gly Asp Lys Thr Thr Leu
          145          150          155          160
Ser Leu Ser His Pro Ser Val Trp Thr Thr Leu Ala Pro Ser Ser Leu
          165          170          175
Arg Thr Pro Trp Pro Tyr Ser Thr Val Lys Phe Leu Lys Val Lys Pro
          180          185          190
Asn Ser Ala Ala Tyr Cys Val Ser Asp Ser Asp Asp Gly Glu Arg Gln
          195          200          205
Pro Lys Phe Phe Leu Gly Ser Leu Phe Lys Ser Lys Lys Pro Arg Ser
          210          215          220
Pro Arg Arg Arg Arg
          225

```

(2) INFORMATION FOR SEQ ID NO:14:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 381 base pairs  
 (B) TYPE: nucleic acid  
 (C) STRANDEDNESS: single  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

- (ix) FEATURE:  
 (A) NAME/KEY: CDS  
 (B) LOCATION: 1..380

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

```

ATG CGT AGC TCA GTT ACG TCA TTG TGG AGC CCT TCA GAT CAC GCC TCT      48
Met Arg Ser Ser Val Thr Ser Leu Trp Ser Pro Ser Asp His Ala Ser
 1           5           10           15
TCG CCC GCA AAT GCC AAG CAT TTT TAT CAT ATT TCC GAT TTC CGG CGC      96
Ser Pro Ala Asn Ala Lys His Phe Tyr His Ile Ser Asp Phe Arg Arg
          20           25           30
GCG GAA ACG GCG CCT GCG GGC GGT ACG GCG GCG CGA ACT GAG GTT AAG      144
Ala Glu Thr Ala Pro Ala Gly Gly Thr Gly Ala Arg Thr Glu Val Lys

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35	40	45	
CGT CGC GCT TTC ACT TTC CCA GCG GCA GCG GTA CTC AGC GCA ACT GAA			192
Arg Arg Ala Phe Thr Phe Pro Ala Ala Ala Val Leu Ser Ala Thr Glu			
50	55	60	
GCC CGA ACC GGC TCG TCT ATC ACC GGC TTA AAC CGT ACT CCG TCT GCA			240
Ala Arg Thr Gly Ser Ser Ile Thr Gly Leu Asn Arg Thr Pro Ser Ala			
65	70	75	80
ATA ATT TCC CTT GCA TGG TCC GAA ATG AGA AAT CTT AAG GAC CCC CTC			288
Ile Ile Ser Leu Ala Trp Ser Glu Met Arg Asn Leu Lys Asp Pro Leu			
85	90	95	
GGG TCC CTG TCG CTG GAA ATA GCT TTA ACG AAT GTC TCT AAC TTT TCC			336
Gly Ser Leu Ser Leu Glu Ile Ala Leu Thr Asn Val Ser Asn Phe Ser			
100	105	110	
CTC TTG AGC TCA GAC CCC ATG GCC TTC GAA AAG TCT TCA TAT TG			380
Leu Leu Ser Ser Asp Pro Met Ala Phe Glu Lys Ser Ser Tyr			
115	120	125	
A			381

## (2) INFORMATION FOR SEQ ID NO:15:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 126 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: protein

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

Met Arg Ser Ser Val Thr Ser Leu Trp Ser Pro Ser Asp His Ala Ser			
1	5	10	15
Ser Pro Ala Asn Ala Lys His Phe Tyr His Ile Ser Asp Phe Arg Arg			
20	25	30	
Ala Glu Thr Ala Pro Ala Gly Gly Thr Gly Ala Arg Thr Glu Val Lys			
35	40	45	
Arg Arg Ala Phe Thr Phe Pro Ala Ala Ala Val Leu Ser Ala Thr Glu			
50	55	60	
Ala Arg Thr Gly Ser Ser Ile Thr Gly Leu Asn Arg Thr Pro Ser Ala			
65	70	75	80
Ile Ile Ser Leu Ala Trp Ser Glu Met Arg Asn Leu Lys Asp Pro Leu			
85	90	95	
Gly Ser Leu Ser Leu Glu Ile Ala Leu Thr Asn Val Ser Asn Phe Ser			
100	105	110	
Leu Leu Ser Ser Asp Pro Met Ala Phe Glu Lys Ser Ser Tyr			
115	120	125	

## (2) INFORMATION FOR SEQ ID NO:16:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 879 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: DNA (genomic)

## (iii) HYPOTHETICAL: NO

## (iv) ANTI-SENSE: NO

## (ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 1..878

-continued

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

ATG TGG TGT CGT TTG CAC TGG ATA AGT CCT CGG TTC AGT ATT ATG CGT Met Trp Cys Arg Leu His Trp Ile Ser Pro Arg Phe Ser Ile Met Arg 1 5 10 15	48
CCC GGT TCC CGA ACT GGT AGG GTT TTG CGA GGC CAG GGG TGT GCT CTG Pro Gly Ser Arg Thr Gly Arg Val Leu Arg Gly Gln Gly Cys Ala Leu 20 25 30	96
TGC AGT TTC TGG CAT CGT ACT CGA ACT CCG AGT ATA AAC CTC CGG TGC Cys Ser Phe Trp His Arg Thr Arg Thr Pro Ser Ile Asn Leu Arg Cys 35 40 45	144
CGC GCT CGG GGT CTG AGT AAT TTC CGG CTC TGC GCC CAG AGT CCG GGT Arg Ala Arg Gly Leu Ser Asn Phe Arg Leu Cys Ala Gln Ser Pro Gly 50 55 60	192
GAA AGG CAC AGG TTC GGT ACT CGG ACT CTG AGT CAA CAC CTC CGG CTC Glu Arg His Arg Phe Gly Thr Arg Thr Leu Ser Gln His Leu Arg Leu 65 70 75 80	240
TGT ACT CGG AGT CTG AGT AGC TTT CGG TAC CGT ACT CGG GGC CTG AGT Cys Thr Arg Ser Leu Ser Ser Phe Arg Tyr Arg Thr Arg Gly Leu Ser 85 90 95	288
GAA AAA GTG TGT TTC AGT ACT CTG AGT TCG CAT AGT GTC CGG CTC GGC Glu Lys Val Cys Phe Ser Thr Leu Ser Ser His Ser Val Arg Leu Gly 100 105 110	336
ACT CGA AGT CTG AGT AAA GGC CTC AGT TCC CGC GCT CTG AGT CCG AGT Thr Arg Ser Leu Ser Lys Gly Leu Ser Ser Arg Ala Leu Ser Pro Ser 115 120 125	384
AAA AAT CGC CGG TTC AGT ACT CGA ACT CAG AGT AGT TTT CGG TAC CGT Lys Asn Arg Arg Phe Ser Thr Arg Thr Gln Ser Ser Phe Arg Tyr Arg 130 135 140	432
GCT CGG GGT CTG AGT AAA CAC CTC CGT TAC CGT ACT CGA ACT CTG TGT Ala Arg Gly Leu Ser Lys His Leu Arg Tyr Arg Thr Arg Thr Leu Cys 145 150 155 160	480
AAA AAC CTC CGG CGC GCT CGG AGC GCG AGC GGT TTC GGG GGG CGT Lys Asn Leu Arg Arg Arg Ala Arg Ser Ala Ser Gly Phe Gly Gly Arg 165 170 175	528
GCT ACG AGA CTG AGT AAA TAT CTC GGG TAT CGT GCT CGG GGT CTG GGC Ala Thr Arg Leu Ser Lys Tyr Leu Gly Tyr Arg Ala Arg Gly Leu Gly 180 185 190	576
AGG TGC CTC GGT TTC TGC ACC CGG AGT CTG AGT AAA AGT CAT CTG TTC Arg Cys Leu Gly Phe Cys Thr Arg Ser Leu Ser Lys Ser His Leu Phe 195 200 205	624
AGC ACT CGG AGT CTG AGT AAA CAA CGC CTC CGT TTC TGC GAT CTG CGT Ser Thr Arg Ser Leu Ser Lys Gln Arg Leu Arg Phe Cys Asp Leu Arg 210 215 220	672
CTG AGT AAG AGC CGC CTG TTC AGT ACT CGG AGT CTG AGT AAA ATA CCA Leu Ser Lys Ser Arg Leu Phe Ser Thr Arg Ser Leu Ser Lys Ile Pro 225 230 235 240	720
CGG TTC CTG ACT CTG GGA CCG CGC GGT TTC CGA CTC GGT ACT CGG ACT Arg Phe Leu Thr Leu Gly Pro Arg Gly Phe Arg Leu Gly Thr Arg Thr 245 250 255	768
CTG AGT AAA GAC CAC CGT TTC TGC ACT CTG GGT CTG TGT AGT TTC ATG Leu Ser Lys Asp His Arg Phe Cys Thr Leu Gly Leu Cys Ser Phe Met 260 265 270	816
TGC CGC GCT CGG GGT CTC GGT AGA AAT CCC CGG CGC GGT CGT AGG AAA Cys Arg Ala Arg Gly Leu Gly Arg Asn Pro Arg Arg Gly Arg Arg Lys 275 280 285	864
CAG TGT ATT TTC TG A Gln Cys Ile Phe 290	879

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## (2) INFORMATION FOR SEQ ID NO:17:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 292 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: protein

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

```

Met Trp Cys Arg Leu His Trp Ile Ser Pro Arg Phe Ser Ile Met Arg
 1           5              10             15
Pro Gly Ser Arg Thr Gly Arg Val Leu Arg Gly Gln Gly Cys Ala Leu
          20              25             30
Cys Ser Phe Trp His Arg Thr Arg Thr Pro Ser Ile Asn Leu Arg Cys
          35              40             45
Arg Ala Arg Gly Leu Ser Asn Phe Arg Leu Cys Ala Gln Ser Pro Gly
          50              55             60
Glu Arg His Arg Phe Gly Thr Arg Thr Leu Ser Gln His Leu Arg Leu
          65              70             75             80
Cys Thr Arg Ser Leu Ser Ser Phe Arg Tyr Arg Thr Arg Gly Leu Ser
          85              90             95
Glu Lys Val Cys Phe Ser Thr Leu Ser Ser His Ser Val Arg Leu Gly
          100             105            110
Thr Arg Ser Leu Ser Lys Gly Leu Ser Ser Arg Ala Leu Ser Pro Ser
          115            120            125
Lys Asn Arg Arg Phe Ser Thr Arg Thr Gln Ser Ser Phe Arg Tyr Arg
          130            135            140
Ala Arg Gly Leu Ser Lys His Leu Arg Tyr Arg Thr Arg Thr Leu Cys
          145            150            155            160
Lys Asn Leu Arg Arg Arg Ala Arg Ser Ala Ser Gly Phe Gly Gly Arg
          165            170            175
Ala Thr Arg Leu Ser Lys Tyr Leu Gly Tyr Arg Ala Arg Gly Leu Gly
          180            185            190
Arg Cys Leu Gly Phe Cys Thr Arg Ser Leu Ser Lys Ser His Leu Phe
          195            200            205
Ser Thr Arg Ser Leu Ser Lys Gln Arg Leu Arg Phe Cys Asp Leu Arg
          210            215            220
Leu Ser Lys Ser Arg Leu Phe Ser Thr Arg Ser Leu Ser Lys Ile Pro
          225            230            235            240
Arg Phe Leu Thr Leu Gly Pro Arg Gly Phe Arg Leu Gly Thr Arg Thr
          245            250            255
Leu Ser Lys Asp His Arg Phe Cys Thr Leu Gly Leu Cys Ser Phe Met
          260            265            270
Cys Arg Ala Arg Gly Leu Gly Arg Asn Pro Arg Arg Gly Arg Arg Lys
          275            280            285
Gln Cys Ile Phe
          290

```

## (2) INFORMATION FOR SEQ ID NO:18:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 534 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: DNA (genomic)

-continued

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(ix) FEATURE:

(A) NAME/KEY: CDS

(B) LOCATION: 1..533

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

ATG CTC CCA AGC CTA CTC AAC AGG GGC TCT CCC CGG CTG AAT TCT CCT	48
Met Leu Pro Ser Leu Leu Asn Arg Gly Ser Pro Arg Leu Asn Ser Pro	
1 5 10 15	
CCT AAG TGT TCA GAG GCC TCT GCT GTA CCA TAT AAC TAT CGT GTA GTA	96
Pro Lys Cys Ser Glu Ala Ser Ala Val Pro Tyr Asn Tyr Arg Val Val	
20 25 30	
CGC CCC TCC CAG TCC GTG TCC GAT ACT GCC CCT TTT GAG AGG ATT GGG	144
Arg Pro Ser Gln Ser Val Ser Asp Thr Ala Pro Phe Glu Arg Ile Gly	
35 40 45	
AGA TTA GAG AAT CGA AAT GAT TGG AGA GCC ACA TTC AGA CTT AAT CAC	192
Arg Leu Glu Asn Arg Asn Asp Trp Arg Ala Thr Phe Arg Leu Asn His	
50 55 60	
ATT TTT ATT GAG TCG GGC GAG CTT AGC GCA GAC GGG TTA ACA ATC GCA	240
Ile Phe Ile Glu Ser Gly Glu Leu Ser Ala Asp Gly Leu Thr Ile Ala	
65 70 75 80	
ACC AGT TCC ACA AGT TCA CTA TCC TGG TCA GCG CCC TTG TTT ATT TCG	288
Thr Ser Ser Thr Ser Ser Leu Ser Trp Ser Ala Pro Leu Phe Ile Ser	
85 90 95	
CAC GCA ACC ATG GGT CCA AAT TTT CGC GAT TCC CTT CTA GTT TGG GAA	336
His Ala Thr Met Gly Pro Asn Phe Arg Asp Ser Leu Leu Val Trp Glu	
100 105 110	
CGT TCT TCG TCG TCT TGC GAG ACC GTG TCT AAT TTT CGG TGC GGG GTG	384
Arg Ser Ser Ser Ser Cys Glu Thr Val Ser Asn Phe Arg Cys Gly Val	
115 120 125	
CAC ATG TTT CTG GTG ACG ATG GAA ATT ACA ATG ACG AGG CCG ATC GTT	432
His Met Phe Leu Val Thr Met Glu Ile Thr Met Thr Arg Pro Ile Val	
130 135 140	
GCG CTC ACG ACG GCA GCC ACG GTT ACC CCA ATT AGC GTA GGG CTC ATT	480
Ala Leu Thr Thr Ala Thr Val Thr Pro Ile Ser Val Gly Leu Ile	
145 150 155 160	
GTC CCG AGA CGG ACA GTA ACG TTT GAA TTT TCG TTT GCG GGT GTC GGT	528
Val Pro Arg Arg Thr Val Thr Phe Glu Phe Ser Phe Ala Gly Val Gly	
165 170 175	
TCG TA A	534
Ser	

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 177 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Met Leu Pro Ser Leu Leu Asn Arg Gly Ser Pro Arg Leu Asn Ser Pro
1 5 10 15
Pro Lys Cys Ser Glu Ala Ser Ala Val Pro Tyr Asn Tyr Arg Val Val
20 25 30
Arg Pro Ser Gln Ser Val Ser Asp Thr Ala Pro Phe Glu Arg Ile Gly
35 40 45
Arg Leu Glu Asn Arg Asn Asp Trp Arg Ala Thr Phe Arg Leu Asn His

-continued

50	55	60
Ile Phe Ile Glu Ser Gly Glu Leu Ser Ala Asp Gly Leu Thr Ile Ala		
65	70	75 80
Thr Ser Ser Thr Ser Ser Leu Ser Trp Ser Ala Pro Leu Phe Ile Ser		
	85	90 95
His Ala Thr Met Gly Pro Asn Phe Arg Asp Ser Leu Leu Val Trp Glu		
	100	105 110
Arg Ser Ser Ser Ser Cys Glu Thr Val Ser Asn Phe Arg Cys Gly Val		
	115	120 125
His Met Phe Leu Val Thr Met Glu Ile Thr Met Thr Arg Pro Ile Val		
	130	135 140
Ala Leu Thr Thr Ala Ala Thr Val Thr Pro Ile Ser Val Gly Leu Ile		
	145	150 155 160
Val Pro Arg Arg Thr Val Thr Phe Glu Phe Ser Phe Ala Gly Val Gly		
	165	170 175
Ser		

(2) INFORMATION FOR SEQ ID NO:20:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 48 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

GAATTCGAGC TCGGTACCCG GATAATACGT ACATGTTAAC GCAGAGGT

48

(2) INFORMATION FOR SEQ ID NO:21:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 36 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

GCTGACCGCT AGTCGACCTG CAGTGAATAA TAAAT

36

(2) INFORMATION FOR SEQ ID NO:22:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 48 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

-continued

TGTCGTCGA GATCCTCTAG AGTCGACGAA AGGTCAGAGA CGATGCCC

48

(2) INFORMATION FOR SEQ ID NO:23:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 38 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

CGGATCAGAA ACTCTTTCGG TACCCGGGAT CCTCTAGA

38

(2) INFORMATION FOR SEQ ID NO:24:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 33 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

GAATACAAGC TTAGATGCAT ATTTACTCGA GCC

33

(2) INFORMATION FOR SEQ ID NO:25:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 51 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

GGTTTGGCGG AGCGGATATG ATCTCGACCT GCAGTGAATA ATAAAATGTG T

51

(2) INFORMATION FOR SEQ ID NO:26:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 48 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

TGTCGTCGA GATCCTCTAG AGTCGAGATC AGCAAAATGT TCACGGGG

48

-continued

(2) INFORMATION FOR SEQ ID NO:27:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 18 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

AAGCTTGGCG TAATCATG

18

(2) INFORMATION FOR SEQ ID NO:28:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 39 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

GGAATTCGAG CTCGGTACCT CGTGGCGAGC GCAGGCGGC

39

(2) INFORMATION FOR SEQ ID NO:29:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 51 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

GGCCGAGTTA GGTTTACTT TTCTAGAGGA TCCCCTCGAC GTCTGGGGCG C

51

(2) INFORMATION FOR SEQ ID NO:30:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 48 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

TTGCTGCGTT CCCGGGGATC CTCTAGAATT AGGTAGTTTG TAGTGCGA

48

(2) INFORMATION FOR SEQ ID NO:31:

-continued

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 42 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

TCAAGATCCA GGAAATCCTT CGGTACCGAG CTCGAATTCTG TA

42

(2) INFORMATION FOR SEQ ID NO:32:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 33 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

GAATTCGAGC TCGGTACCGA AAGCTACTCA GAC

33

(2) INFORMATION FOR SEQ ID NO:33:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 42 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

CGCAAACAGC TCTCGTAACT CTAGAAGTTA ACGATCGCTG TT

42

(2) INFORMATION FOR SEQ ID NO:34:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 57 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

GAATAGCATA CCAATGCCTA TTCATTGGGA CTCGACTCTA GAGGATCCCC GGGAAACG

57

(2) INFORMATION FOR SEQ ID NO:35:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 42 base pairs
  - (B) TYPE: nucleic acid



-continued

(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

TCGAGGGGAT CCTCTAGAGT CGAGGGACCC ATGGTTGCGT GC

42

(2) INFORMATION FOR SEQ ID NO:36:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 42 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

TTTACTAAAG CGCGGCGAAA GCTTCGTCGT GCTGGTTCT GG

42

(2) INFORMATION FOR SEQ ID NO:37:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 21 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

AAGCTTGGCG TAATCATGGT C

21

(2) INFORMATION FOR SEQ ID NO:38:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 48 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

GGAATTCGAG CTCGGTACCC GGATAATACG TACATGTTAA CGCAGAGG

48

(2) INFORMATION FOR SEQ ID NO:39:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 45 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

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(ii) MOLECULE TYPE: DNA (genomic)  
(iii) HYPOTHETICAL: NO  
(iv) ANTI-SENSE: NO  
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:  
ATCTATTGGA GCGTTTAGCG CGCGTCGACG AAAGGTCAGA GACGA 45

(2) INFORMATION FOR SEQ ID NO:40:  
(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 27 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear  
(ii) MOLECULE TYPE: DNA (genomic)  
(iii) HYPOTHETICAL: NO  
(iv) ANTI-SENSE: NO  
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:  
CTGCTTCATT TCTGATCCCC GGGAACG 27

(2) INFORMATION FOR SEQ ID NO:41:  
(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 51 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear  
(ii) MOLECULE TYPE: DNA (genomic)  
(iii) HYPOTHETICAL: NO  
(iv) ANTI-SENSE: NO  
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:  
ACCACCCCG CGCCCAGAC GTCGAGGGGA TCAATTATTG CGTATTGAAT A 51

(2) INFORMATION FOR SEQ ID NO:42:  
(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 33 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear  
(ii) MOLECULE TYPE: DNA (genomic)  
(iii) HYPOTHETICAL: NO  
(iv) ANTI-SENSE: NO  
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:  
ATCAGAACT CTTTCGGTAC CGAGCTCGAA TTC 33

(2) INFORMATION FOR SEQ ID NO:43:  
(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 48 base pairs  
(B) TYPE: nucleic acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear  
(ii) MOLECULE TYPE: DNA (genomic)  
(iii) HYPOTHETICAL: NO

-continued

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

GAATTCGAGC TCGGTACCCG GATAATACGT ACATGTTAAC GCAGAGGT

48

(2) INFORMATION FOR SEQ ID NO:44:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 33 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

GCTGACCGCT AGTCGACTCT AGAGGATCCC CTC

33

(2) INFORMATION FOR SEQ ID NO:45:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 42 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

CGTTCCCGGG GATCCTCTAG AGTCGACGGC AGAGTCGCAG AC

42

(2) INFORMATION FOR SEQ ID NO:46:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 30 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:

TGATCCAAAC TCGGATCCTC TAGAGTCGAC

30

(2) INFORMATION FOR SEQ ID NO:47:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 48 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

-continued

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:

AAGCTTGGGC TGCAGGTCGA CTCTAGAGGA TCCCCTCGAC GTCTGGGG

48

(2) INFORMATION FOR SEQ ID NO:48:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 60 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:

CACACCTTGTG CGCATCTCCA CAGCTCAACA ATGAATTCCA TGTTACGTCC TGTAGAAACC

60

(2) INFORMATION FOR SEQ ID NO:49:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 60 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

CAGGGAGGCA AACAAATGAAT CAACAACCTCT CCCGGGAGAT GGGGGAGGCT AACTGAAACA

60

(2) INFORMATION FOR SEQ ID NO:50:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 45 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

TGCTGCGTTC CCGGGGATCC TCTAGAGTCG ACCTGCAGCC CAAGC

45

(2) INFORMATION FOR SEQ ID NO:51:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 48 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:

TCTAGAGTCG ACCTGCAGTG AATAATAAAA TGTTGTTTG TCCGAAAT

48

-continued

(2) INFORMATION FOR SEQ ID NO:52:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 45 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:

CTCCATAGAA GACACCGGGA CCATGGATCC CGTCGTTTCA CAACG

45

(2) INFORMATION FOR SEQ ID NO:53:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 105 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:

TCGGCGGAAA TCCAGCTGAG CGCCGGTCGC TACCATTACC AGTTGGTCTG GTGTCAAAAA

60

GATCTAGAAT AAGCTAGAGG ATCGATCCCC TATGGCGATC ATCAG

105

(2) INFORMATION FOR SEQ ID NO:54:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 36 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:

CCGTCGAGAT CCTCTAGAGT CGACCTGCAG GTCGAC

36

(2) INFORMATION FOR SEQ ID NO:55:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 20 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: N

(iv) ANTI-SENSE: N

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:

CCTAGCACCC TTGTATCGCG

20

-continued

(2) INFORMATION FOR SEQ ID NO:56:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 29 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: N

(iv) ANTI-SENSE: N

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:

CGCCTCGAGT CCCAATGAAT AGGCATTGG

29

(2) INFORMATION FOR SEQ ID NO:57:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 27 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: N

(iv) ANTI-SENSE: N

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:

CGCCTCGAGG ACCCATGGTT GCGTGGC

27

(2) INFORMATION FOR SEQ ID NO:58:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 20 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: N

(iv) ANTI-SENSE: N

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:

CTCGTCCGAA CGAGTTACAG

20

(2) INFORMATION FOR SEQ ID NO:59:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 18913 base pairs
  - (B) TYPE: nucleic acid
  - (C) STRANDEDNESS: single
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: N

(iv) ANTI-SENSE: N

(ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 697..1533
- (D) OTHER INFORMATION:

(ix) FEATURE:

- (A) NAME/KEY: CDS

-continued

(B) LOCATION: complement (1900..2784)  
(D) OTHER INFORMATION:

(ix) FEATURE:  
(A) NAME/KEY: CDS  
(B) LOCATION: complement (2916..3605)  
(D) OTHER INFORMATION:

(ix) FEATURE:  
(A) NAME/KEY: CDS  
(B) LOCATION: 3694..5124  
(D) OTHER INFORMATION:

(ix) FEATURE:  
(A) NAME/KEY: CDS  
(B) LOCATION: 5210..7081  
(D) OTHER INFORMATION:

(ix) FEATURE:  
(A) NAME/KEY: CDS  
(B) LOCATION: 7245..8123  
(D) OTHER INFORMATION:

(ix) FEATURE:  
(A) NAME/KEY: CDS  
(B) LOCATION: 8333..11290  
(D) OTHER INFORMATION:

(ix) FEATURE:  
(A) NAME/KEY: CDS  
(B) LOCATION: 11098..12402  
(D) OTHER INFORMATION:

(ix) FEATURE:  
(A) NAME/KEY: CDS  
(B) LOCATION: 12510..13598  
(D) OTHER INFORMATION:

(ix) FEATURE:  
(A) NAME/KEY: CDS  
(B) LOCATION: 13792..15291  
(D) OTHER INFORMATION:

(ix) FEATURE:  
(A) NAME/KEY: CDS  
(B) LOCATION: 15298..16080  
(D) OTHER INFORMATION:

(ix) FEATURE:  
(A) NAME/KEY: CDS  
(B) LOCATION: 16129..17013  
(D) OTHER INFORMATION:

(ix) FEATURE:  
(A) NAME/KEY: CDS  
(B) LOCATION: complement (17380..18216)  
(D) OTHER INFORMATION:

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:

GGATCCCGAA GAGCTCTCCC AGAAGTTTT CTTTTCGGAC GTATCGGAGG ACGAAGAACC	60
GGCAGCGGGG AGGAGCTGGA GCGACCCGGA GTCGGAGGAA GAGCAGCCTG GGTGCCGGGG	120
AGTGGACTTG GCGGAGGAGG ACACGGGACA CAGCTCCACC GAGTCAGAGC CCACGCAATC	180
TGACTTAGAC TTTATTGACG ACAGCTCTCC GCGCGCGCGG CCATTTGCTA TCCCCGCGT	240
CCGTGCGTTA TTGCGGTGCG CGGCACCCGC AAAGACCCAC GGAAGGCTTC GGCCGCCAGG	300
GCGGGTAGGC GCACTCTTAA AAGACGGAGG TTGTCATTTT CTTCTTCCTC TGACGAGGAA	360
TCCGAGGAGA GAAGTAAAAA AGAAGAAGCG GCCTCGACCC CTGCACGGCG ACGCAAGGCC	420
GAGGCCTCGA CGAGCAGATA GAGGAGACGC GGGGCAGAAC CTCCTCCCTC CTCCACCC	480
CCTACTCTGG ACATTTATTG CCCGCTCGAT CCATCTCAT CCAGAACTTC TTTCCCGCTC	540
AGCCTTCACG CAGAAGCGGA CGCGCGCCCC TTTCGACCG CCGGACATCC CGCCGCCCC	600

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CCCCCTTCAC GCCCGGCGCA ATCCGTAGCC GTCCAACTCG GCCCAGCACA ACCGCAGTAG	660
ACCGCCCGGA CCGCTCTCCT CTAGACACAT CCCTAA ATG GAA AAC ATG CTC GAC	714
Met Glu Asn Met Leu Asp	
1 5	
GGG TGC TAC CCG CTG GCG CTG ATG GAC AGC GAT CAC ATT ACT GCG CAC	762
Gly Cys Tyr Pro Leu Ala Leu Met Asp Ser Asp His Ile Thr Ala His	
10 15 20	
GCG GTA CCT CGT GGC GAG CGC AGG CGG CAA GGT GCC GCT GTC GCC TCG	810
Ala Val Pro Arg Gly Glu Arg Arg Arg Gln Gly Ala Ala Val Ala Ser	
25 30 35	
TCG GAG TCG GCC GAC TCG GTA GAC CCG TGC ATT CGG ATC GCC TCG CGG	858
Ser Glu Ser Ala Asp Ser Val Asp Pro Cys Ile Arg Ile Ala Ser Arg	
40 45 50	
CTC TGG CGC GAG TTA GTC GAG ATA TCG TCC GAA CTC AAG GAC GGT TAC	906
Leu Trp Arg Glu Leu Val Glu Ile Ser Ser Glu Leu Lys Asp Gly Tyr	
55 60 65 70	
GGA GAG TTC ACG TCA GCG AGA GAC CGC CGC AAC GCG CTG ATT GCT GCC	954
Gly Glu Phe Thr Ser Ala Arg Asp Arg Arg Asn Ala Leu Ile Ala Ala	
75 80 85	
AAC GAA CGG CTA CGT TCG GCT TTT CTG GGG GCC AGC CGG GCG ACG CGC	1002
Asn Glu Arg Leu Arg Ser Ala Phe Leu Gly Ala Ser Arg Ala Thr Arg	
90 95 100	
GGC CTA GGT TTG AGG CCG CGG TGG GCG TCG ACG GAG AGC GTC GCC AAC	1050
Gly Leu Gly Leu Arg Pro Arg Trp Ala Ser Thr Glu Ser Val Ala Asn	
105 110 115	
TCC CCC ACT GAC CCG AAT AAC GGC AAC GGG TTG GGA GAA TTA GAG GAG	1098
Ser Pro Thr Asp Pro Asn Asn Gly Asn Gly Leu Gly Glu Leu Glu Glu	
120 125 130	
GCA ATG GAA GGG ATC GAG GGC GAT TTC TGG CTC GAC TCT CTG GAC GGT	1146
Ala Met Glu Gly Ile Glu Gly Asp Phe Trp Leu Asp Ser Leu Asp Gly	
135 140 145 150	
GAC CGC TTC GAG GAC GAG AGC CGT ACC ATG CAG AGC GAG AAT ATG CGT	1194
Asp Arg Phe Glu Asp Glu Ser Arg Thr Met Gln Ser Glu Asn Met Arg	
155 160 165	
TTC GTG ATC GAG AAA GAA CTG TTA TCC TGG CTG TCC CGA CAC CTG CCG	1242
Phe Val Ile Glu Lys Glu Leu Leu Ser Trp Leu Ser Arg His Leu Pro	
170 175 180	
GCC GAC CTC GCG TCC GCC GAG CGA GAG ACC TCC CGG TCT CTC CTG GCG	1290
Ala Asp Leu Ala Ser Ala Glu Arg Glu Thr Ser Arg Ser Leu Leu Ala	
185 190 195	
GCC GGG CAC TGG TGC TGC TTG TGG CAC CCT CGG CCG TGC GCG GAA GCG	1338
Ala Gly His Trp Cys Cys Leu Trp His Pro Arg Pro Cys Arg Glu Ala	
200 205 210	
TGT TTG TAC GAC TCG ATT TAC GTG CAG AGT CTT TTC TGC GTC GGG ACG	1386
Cys Leu Tyr Asp Ser Ile Tyr Val Gln Ser Leu Phe Cys Val Gly Thr	
215 220 225 230	
GGG AGA GTC CCG CAA TCG GAG ATG CGC CGT CGC GAA TAC CTG GCC GCC	1434
Gly Arg Val Pro Gln Ser Glu Met Arg Arg Arg Glu Tyr Leu Ala Ala	
235 240 245	
TTG CGC GCC GGC GCG GCT GCC GCC AAC TCT CCC GAA GTG AGC GCC TCG	1482
Leu Arg Ala Gly Ala Ala Ala Ala Asn Ser Pro Glu Val Ser Ala Ser	
250 255 260	
ATC TTT CCG AGG GAC GCT GGA ATC GCG CTG GCG CTG GCG CGG CGC CGT	1530
Ile Phe Ala Arg Asp Ala Gly Ile Ala Leu Ala Leu Ala Arg Arg Arg	
265 270 275	
TGA CGGGAGAATG ACGCCCTCTA GCGGCTTCCT TACCTCCGCG TCCCTGACAA	1583



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CCTCGCGGT	TTTTACACTG	TCCTCCGTCC	ACTCTCCCC	CTCACCCT	CCGCGGCAGC	1643
GAAACACAAC	CCCCCCCCC	CCCCAGAAAC	GAGCGACACG	CGAGCGCTGC	GAAATAAATA	1703
AAGTAATATT	ATTGTGTGTT	TTTCACGTTG	TTGCAATCGA	GAGGCCGTTT	GTCTGTCTGT	1763
GTCTGTGCGG	AGCTAGGCTT	TCCCAGGCGG	CCCCGTTCCA	CCGTTGCGTT	AGGCCGGTGG	1823
CGACGGGACA	TAGAGAAAGA	TAGAGCGCGC	GCCCTGGCGG	CGAGAGGGTG	TTGCGGGGGT	1883
AAATGGGACC	CTGAGCTCAC	CATTTTGGCG	GGGGATTGCA	CGGGTAACAA	AAAGCTCTCT	1943
CGCACATAAT	GATTTCCCTT	AAACAGTGGC	TGTAAAGCT	TTCCTCGACT	GGGACGCGCA	2003
CGTCCGGAGA	CATGATCTTA	TCGGTAGCTA	CACAGTTCAT	GAGGTGGGCC	ACGAACGCGC	2063
GGATCGAGTT	TTGGGAACCT	TCGGGGAGGT	CTTCCGGGAG	GGTGAAGTTT	GACAGAGGCA	2123
GCGCTATCAC	CAGGAGGCTC	CGCACCATCT	CCATGCCTAT	CCTTATCGCC	GCGAGTCCGG	2183
CGGCCGGCGC	GCTGCTCTGG	TTATTCCAGT	GCGCGGACCG	CGAGTGCGCC	CCTCCCCGGG	2243
CTCTGATATA	GAGCACCGGC	AGCTCGACGG	CGCGGAGAA	AAAAGAAAGA	ATGTCCGGCC	2303
CAATGACTGG	AACTTTGGGC	ACGCTCTTTA	TTTCCACGCG	GGCGGCCCGG	GGAATCTGCT	2363
TGCCCCAGAC	CTTGCTTTCC	AACTCCCCGT	TCGGCCCCCC	AACTAACTCC	GACAGCGCGG	2423
TCCACAGTCC	TACCGCCGCT	GCGACGGCGC	GCTTAGCCGC	GGGCGCTATT	CGCGGGTCGT	2483
GCGCCGTGAT	ATCTTCGGCG	ACCTGCAGAC	TGCCAGCCT	TTCCTTCCT	TCAAAATACG	2543
CGCGGGCGCG	CTGTACGATC	ACCGCGGCCA	GATCGGGCCA	AAAGAAATA	TCGCAACTCT	2603
GCGACGCCCG	CCAGAATCTC	CCTCCGGGCA	GGTCCGTGCC	CCTAAAGGCC	GCCGAGAAAG	2663
CTAAGTCCAA	ATGTGACGTC	GGAGGTCTCG	ACATGGTCGC	CAACCTCCA	AATGCTACCC	2723
GCCGGCCAC	GCAACGCGGG	CTTTTATAAA	GATGGCGCGC	GAGACAATAA	CACCTTACTCA	2783
TCCGCGTACG	CGTTTATTAT	TGTCAATATT	TGTGTGGTTA	TTATTACTGC	TACCGCCCTT	2843
GTTTCTGCAA	GGCCCTCGCC	GCGGCCCAGG	CCACTATTCC	GGCAGCGGCC	GCCGACGCGG	2903
CGAGCGTCGC	CGCTAACGTC	GGCGCCCGG	GGAGCGGGGT	TTCTTCGACT	TAAATAGACT	2963
CCCGAGAAAA	AATTTTGGCT	GCCGTTCGCC	ATCATCCGAG	TCGGAAACAC	AGTATGCGGC	3023
CGAGTTAGGT	TTTACTTTTA	AAAACTTTAC	CGTGCTGTAC	GGCCAGGGCG	TTCTCAGGCT	3083
CGAAGGGGGA	AGAGTTGTCC	AGACTGATGG	GTGACTCAGA	GACAGCGTTG	TCTGTCTTCC	3143
GTTTACCAAA	AATATTTCCA	CTCCTCTCTC	AAAATTTTTA	CCTCCGGTTT	CGGTAATTAG	3203
GAAAGTTTTT	GGCGCAGGGA	GGTTTAAAGC	TGCCATGCAT	ATGTCAGCGG	TACCCAGCAC	3263
CCACAAATGG	AACTCTTTTG	CGGCATACGC	GCCAGATGAC	AAATGGTAAA	ACCCTGCGTC	3323
CAAGCCGCTC	CACTCGGGAC	TTACTCCAGG	CGGGTCGCCC	CCCTCACC GA	ACCGAATCAC	3383
GGGTCTGCAC	ATCTGGGAA	GGGAAAACAG	CTCCCGGAA	ACTTCGTACA	GAGATGCCGG	3443
GCGCACGATT	ACCATAATG	TACTCGGACG	ATCGTAACTC	GCCATAGTTT	TCACTGCGTG	3503
AACCAATTCT	TTCCATCCAG	AATCCGAGAG	CTCAAATCTA	GAATTAGGTA	GTTTGTAGTG	3563
CGAATCGACC	GCAGAAACTA	TAGTCACTTT	TACAGGCGCC	ATCGCCGCTCAG		3615
ACTCCACCCC	GCTATGATGT	CAGAAATATA	ACGCTCTTAT	TCTAGCAGAG	TCAGGCCAAT	3675
ATATACAGCT	TAGAGAAG	ATG CGG TTT	CGG CGC ATC	TGT TCA CGC TCT	AGG	3726
	Met Arg Phe Arg Arg Ile Cys Ser Arg Ser Arg					
	1		5		10	
GCA GAA AAA CGA AGA AGA ACA ACC GAG AAT CCG CTT ACC TCA AAA CGC						3774
Ala Glu Lys Arg Arg Arg Thr Thr Glu Asn Pro Leu Thr Ser Lys Arg						
	15		20		25	

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GTT	TGC	GTA	TTG	GAT	AGT	TTC	TCA	CGG	ACA	ATG	TCA	TTG	CGC	CCC	TAT	3822
Val	Cys	Val	Leu	Asp	Ser	Phe	Ala	Ser	Arg	Thr	Met	Ser	Leu	Arg	Pro	Tyr
		30					35					40				
GCA	GAA	ATT	TTG	CCG	ACC	GCG	GAA	GGC	GTC	GAG	CGC	CTC	GCC	GAA	CTT	3870
Ala	Glu	Ile	Leu	Pro	Thr	Ala	Glu	Gly	Val	Glu	Arg	Leu	Ala	Glu	Leu	
	45					50				55						
GTT	AGT	GTG	ACA	ATG	ACA	GAA	CGC	GCG	GAA	CCT	GTG	ACA	GAG	AAT	ACA	3918
Val	Ser	Val	Thr	Met	Thr	Glu	Arg	Ala	Glu	Pro	Val	Thr	Glu	Asn	Thr	
	60				65					70					75	
GCT	GTA	AAC	AGT	ATC	CCC	CCG	GCT	AAC	GAG	AAC	GGG	CAG	AAC	TTC	GCA	3966
Ala	Val	Asn	Ser	Ile	Pro	Pro	Ala	Asn	Glu	Asn	Gly	Gln	Asn	Phe	Ala	
			80					85						90		
TAT	GCA	GGC	GAT	GGG	CCC	TCG	ACT	ACT	GAA	AAA	GTT	GAC	GGC	TCG	CAT	4014
Tyr	Ala	Gly	Asp	Gly	Pro	Ser	Thr	Thr	Glu	Lys	Val	Asp	Gly	Ser	His	
		95					100					105				
ACA	GAC	TTC	GAT	GAA	GCA	TCG	AGC	GAC	TAC	GCC	GGC	CCT	GTC	CCG	CTC	4062
Thr	Asp	Phe	Asp	Glu	Ala	Ser	Ser	Asp	Tyr	Ala	Gly	Pro	Val	Pro	Leu	
		110				115						120				
GCG	CAA	ACT	AGA	TTG	AAG	CAT	TCG	GAT	GAA	TTT	CTT	CAG	CAC	TTC	CGA	4110
Ala	Gln	Thr	Arg	Leu	Lys	His	Ser	Asp	Glu	Phe	Leu	Gln	His	Phe	Arg	
	125					130					135					
GTT	TTA	GAC	GAT	TTG	GTG	GAG	GGG	GCT	TAC	GGG	TTT	ATC	TGC	GAC	GTC	4158
Val	Leu	Asp	Asp	Leu	Val	Glu	Gly	Ala	Tyr	Gly	Phe	Ile	Cys	Asp	Val	
	140			145						150					155	
CGT	CGC	TAC	ACC	GAG	GAA	GAG	CAA	CGT	CGA	AGA	GGG	GTT	AAC	AGT	ACT	4206
Arg	Arg	Tyr	Thr	Glu	Glu	Glu	Gln	Arg	Arg	Arg	Gly	Val	Asn	Ser	Thr	
			160						165					170		
AAC	CAG	GGG	AAA	TCA	AAA	TGT	AAG	CGC	CTG	ATA	GCT	AAA	TAT	GTG	AAA	4254
Asn	Gln	Gly	Lys	Ser	Lys	Cys	Lys	Arg	Leu	Ile	Ala	Lys	Tyr	Val	Lys	
		175						180					185			
AAT	GGA	ACA	AGG	GCG	GCC	TCT	CAG	CTG	GAA	AAT	GAA	ATT	TTG	GTT	CTC	4302
Asn	Gly	Thr	Arg	Ala	Ala	Ser	Gln	Leu	Glu	Asn	Glu	Ile	Leu	Val	Leu	
		190					195					200				
GGG	CGC	CTA	AAT	CAC	GAG	AAT	GTT	CTC	AAG	ATC	CAG	GAA	ATC	CTT	CGG	4350
Gly	Arg	Leu	Asn	His	Glu	Asn	Val	Leu	Lys	Ile	Gln	Glu	Ile	Leu	Arg	
	205					210					215					
TAC	CCG	GAT	AAT	ACG	TAC	ATG	TTA	ACG	CAG	AGG	TAT	CAG	TTC	GAC	TTG	4398
Tyr	Pro	Asp	Asn	Thr	Tyr	Met	Leu	Thr	Gln	Arg	Tyr	Gln	Phe	Asp	Leu	
	220				225					230					235	
TAC	AGC	TAC	ATG	TAC	GAT	GAA	GCG	TTC	GAC	TGG	AAA	GAC	AGT	CCA	ATG	4446
Tyr	Ser	Tyr	Met	Tyr	Asp	Glu	Ala	Phe	Asp	Trp	Lys	Asp	Ser	Pro	Met	
			240					245						250		
CTT	AAA	CAG	ACT	AGA	CGC	ATC	ATG	AAG	CAG	CTC	ATG	TCA	GCG	GTC	TCG	4494
Leu	Lys	Gln	Thr	Arg	Arg	Ile	Met	Lys	Gln	Leu	Met	Ser	Ala	Val	Ser	
		255					260					265				
TAT	ATC	CAT	TCA	AAG	AAA	CTG	ATT	CAC	AGG	GAC	ATC	AAA	CTC	GAA	AAT	4542
Tyr	Ile	His	Ser	Lys	Lys	Leu	Ile	His	Arg	Asp	Ile	Lys	Leu	Glu	Asn	
	270					275						280				
ATT	TTC	TTA	AAC	TGC	GAC	GGC	AAG	ACA	GTG	CTG	GGC	GAC	TTT	GGA	ACT	4590
Ile	Phe	Leu	Asn	Cys	Asp	Gly	Lys	Thr	Val	Leu	Gly	Asp	Phe	Gly	Thr	
	285					290					295					
GTC	ACG	CCT	TTT	GAA	AAT	GAG	CGG	GAG	CCC	TTC	GAA	TAT	GGA	TGG	GTG	4638
Val	Thr	Pro	Phe	Glu	Asn	Glu	Arg	Glu	Pro	Phe	Glu	Tyr	Gly	Trp	Val	
	300			305					310						315	
GGG	ACC	GTG	GCT	ACT	AAC	TCT	CCC	GAG	ATA	CTC	GCC	AGG	GAT	TCG	TAC	4686
Gly	Thr	Val	Ala	Thr	Asn	Ser	Pro	Glu	Ile	Leu	Ala	Arg	Asp	Ser	Tyr	
			320					325						330		
TGT	GAA	ATT	ACA	GAC	ATT	TGG	AGC	TGC	GGA	GTA	GTA	TTG	CTG	GAA	ATG	4734
Cys	Glu	Ile	Thr	Asp	Ile	Trp	Ser	Cys	Gly	Val	Val	Leu	Leu	Glu	Met	
		335					340						345			

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GTA AGC CAT GAA TTT TGC CCG ATC GGC GAT GGC GGG GGA AAT CCG CAC 4782  
 Val Ser His Glu Phe Cys Pro Ile Gly Asp Gly Gly Gly Asn Pro His  
 350 355 360

CAG CAA TTG CTG AAA GTT ATC GAC TCT CTC TCA GTT TGT GAT GAA GAG 4830  
 Gln Gln Leu Leu Lys Val Ile Asp Ser Leu Ser Val Cys Asp Glu Glu  
 365 370 375

TTC CCA GAC CCC CCG TGT AAT CTG TAC AAT TAT TTG CAT TAT GCG AGC 4878  
 Phe Pro Asp Pro Pro Cys Asn Leu Tyr Asn Tyr Leu His Tyr Ala Ser  
 380 385 390 395

ATC GAT CGC GCC GGA CAT ACG GTC CCG TCG CTC ATA CGG AAC CTC CAC 4926  
 Ile Asp Arg Ala Gly His Thr Val Pro Ser Leu Ile Arg Asn Leu His  
 400 405 410

CTT CCG GCG GAT GTG GAA TAC CCT CTA GTT AAA ATG CTT ACT TTT GAC 4974  
 Leu Pro Ala Asp Val Glu Tyr Pro Leu Val Lys Met Leu Thr Phe Asp  
 415 420 425

TGG CGT TTG AGA CCC AGC GCG GCC GAA GTA TTG GCA ATG CCA CTG TTT 5022  
 Trp Arg Leu Arg Pro Ser Ala Ala Glu Val Leu Ala Met Pro Leu Phe  
 430 435 440

TCG GCT GAA GAG GAA CGG ACC ATA ACA ATT ATT CAT GGA AAA CAT AAA 5070  
 Ser Ala Glu Glu Glu Arg Thr Ile Thr Ile Ile His Gly Lys His Lys  
 445 450 455

CCC ATC CGA CCC GAA ATC CGT GCG CGG GTG CCA CGG TCC ATG AGT GAA 5118  
 Pro Ile Arg Pro Glu Ile Arg Ala Arg Val Pro Arg Ser Met Ser Glu  
 460 465 470 475

GGT TAA TAATAAAGGA CGGAGATAGA GAACTGAAGC GTCAGATTTT TTTAAAAAAA 5174  
 Gly  
 TAAATGATCG AGAAGCTTATG ATTGTCTTT CTGTA ATG ACC TTG CCC CAT CGA 5227  
 Met Thr Leu Pro His Arg  
 1 5

TTA ACG AAA AGA CCT TTC GCG CGT CGA TTC TGC TCG GTC TTT GTG ATA 5275  
 Leu Thr Lys Arg Pro Phe Ala Arg Arg Phe Cys Ser Val Phe Val Ile  
 10 15 20

CAT TAT AGT GAG ACT AAA CTC GAC CGA TAT AAC AAG ACA ATG TTA CTC 5323  
 His Tyr Ser Glu Thr Lys Leu Asp Arg Tyr Asn Lys Thr Met Leu Leu  
 25 30 35

TAT AGA CCG GAC TCA ACC ATG CGG CAT AGC GGA GGC GAC GCA AAT CAC 5371  
 Tyr Arg Pro Asp Ser Thr Met Arg His Ser Gly Gly Asp Ala Asn His  
 40 45 50

AGA GGG ATA AGG CCG AGG CGG AAA TCT ATT GGA GCG TTT AGC GCG CGC 5419  
 Arg Gly Ile Arg Pro Arg Arg Lys Ser Ile Gly Ala Phe Ser Ala Arg  
 55 60 65 70

GAA AAG ACT GGA AAA CGA AAT GCG CTG ACG GAA AGC AGC TCC TCC TCC 5467  
 Glu Lys Thr Gly Lys Arg Asn Ala Leu Thr Glu Ser Ser Ser Ser Ser  
 75 80 85

GAC ATG CTA GAT CCG TTT TCC ACG GAT AAG GAA TTT GGC GGT AAG TGG 5515  
 Asp Met Leu Asp Pro Phe Ser Thr Asp Lys Glu Phe Gly Gly Lys Trp  
 90 95 100

ACG GTA GAC GGA CCT GCC GAC ATT ACT GCC GAG GTC CTT TCT CAG GCA 5563  
 Thr Val Asp Gly Pro Ala Asp Ile Thr Ala Glu Val Leu Ser Gln Ala  
 105 110 115

TGG GAC GTT CTC CAA TTA GTG AAG CAT GAA GAT GCG GAG GAG GAG AGA 5611  
 Trp Asp Val Leu Gln Leu Val Lys His Glu Asp Ala Glu Glu Glu Arg  
 120 125 130

GTG ACT TAT GAG TCC AAA CCG ACC CCG ATA CAG CCG TTC AAT GCC TGG 5659  
 Val Thr Tyr Glu Ser Lys Pro Thr Pro Ile Gln Pro Phe Asn Ala Trp  
 135 140 145 150

CCG GAC GGG CCG AGT TGG AAC GCG CAG GAT TTT ACT CGA GCG CCA ATA 5707  
 Pro Asp Gly Pro Ser Trp Asn Ala Gln Asp Phe Thr Arg Ala Pro Ile  
 155 160 165

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GTT TAT CCC TCT GCG GAG GTA TTG GAC GCA GAG GCG TTG AAA GTA GGG	5755
Val Tyr Pro Ser Ala Glu Val Leu Asp Ala Glu Ala Leu Lys Val Gly	
170 175 180	
GCA TTC GTT AGC CGA GTT TTA CAA TGT GTA CCG TTC ACG CGA TCA AAG	5803
Ala Phe Val Ser Arg Val Leu Gln Cys Val Pro Phe Thr Arg Ser Lys	
185 190 195	
AAA AGC GTT ACG GTG CGG GAT GCG CAG TCG TTT TTG GGG GAC TCG TTC	5851
Lys Ser Val Thr Val Arg Asp Ala Gln Ser Phe Leu Gly Asp Ser Phe	
200 205 210	
TGG AGA ATA ATG CAG AAC GTT TAC ACG GTT GTC TTA CGA CAG CAC ATA	5899
Trp Arg Ile Met Gln Asn Val Tyr Thr Val Val Leu Arg Gln His Ile	
215 220 225 230	
ACT CGA CTC AGG CAC CCT TCC AGC AAA AGC ATT GTT AAC TGC AAC GAC	5947
Thr Arg Leu Arg His Pro Ser Ser Lys Ser Ile Val Asn Cys Asn Asp	
235 240 245	
CCT CTA TGG TAC GCC TAC GCG AAT CAA TTT CAC TGG AGA GGA ATG CGC	5995
Pro Leu Trp Tyr Ala Tyr Ala Asn Gln Phe His Trp Arg Gly Met Arg	
250 255 260	
GTG CCG TCG CTT AAA TTA GCC TCT CCC CCG GAG GAG AAT ATT CAA CAC	6043
Val Pro Ser Leu Lys Leu Ala Ser Pro Pro Glu Glu Asn Ile Gln His	
265 270 275	
GGC CCA ATG GCC GCC GTT TTT AGA AAC GCG GGG GCT GGT CTG TTC CTG	6091
Gly Pro Met Ala Ala Val Phe Arg Asn Ala Gly Ala Gly Leu Phe Leu	
280 285 290	
TGG CCT GCC ATG CGC GCA GCC TTT GAA GAG CGC GAC AAG CGA CTG TTA	6139
Trp Pro Ala Met Arg Ala Ala Phe Glu Glu Arg Asp Lys Arg Leu Leu	
295 300 305 310	
AGA GCA TGC CTG TCT TCA CTC GAT ATC ATG GAC GCA GCC GTC CTC GCG	6187
Arg Ala Cys Leu Ser Ser Leu Asp Ile Met Asp Ala Ala Val Leu Ala	
315 320 325	
TCG TTT CCA TTT TAC TGG CGC GGC GTC CAA GAC ACC TCG CGC TTC GAG	6235
Ser Phe Pro Phe Tyr Trp Arg Gly Val Gln Asp Thr Ser Arg Phe Glu	
330 335 340	
CCT GCG CTG GGC TGT TTG TCA GAG TAC TTT GCA CTA GTG GTG TTA CTG	6283
Pro Ala Leu Gly Cys Leu Ser Glu Tyr Phe Ala Leu Val Val Leu Leu	
345 350 355	
GCC GAG ACG GTC TTA GCG ACC ATG TTC GAC CAC GCA CTG GTA TTC ATG	6331
Ala Glu Thr Val Leu Ala Thr Met Phe Asp His Ala Leu Val Phe Met	
360 365 370	
AGG GCG CTG GCA GAC GGC AAT TTC GAT GAC TAT GAC GAA ACT AGA TAT	6379
Arg Ala Leu Ala Asp Gly Asn Phe Asp Asp Tyr Asp Glu Thr Arg Tyr	
375 380 385 390	
ATA GAC CCC GTT AAA AAC GAG TAC CTG AAC GGA GCC GAG GGT ACT CTG	6427
Ile Asp Pro Val Lys Asn Glu Tyr Leu Asn Gly Ala Glu Gly Thr Leu	
395 400 405	
TTA CGG GGC ATA GTG GCC TCC AAC ACC GCT CTG GCG GTG GTT TGC GCA	6475
Leu Arg Gly Ile Val Ala Ser Asn Thr Ala Leu Ala Val Val Cys Ala	
410 415 420	
AAC ACC TAT TCG ACG ATA AGA AAA CTC CCG TCC GTG GCA ACT AGC GCG	6523
Asn Thr Tyr Ser Thr Ile Arg Lys Leu Pro Ser Val Ala Thr Ser Ala	
425 430 435	
TGC AAT GTT GCC TAC AGG ACC GAA ACG CTG AAA GCG AGG CGC CCT GGC	6571
Cys Asn Val Ala Tyr Arg Thr Glu Thr Leu Lys Ala Arg Arg Pro Gly	
440 445 450	
ATG AGC GAC ATA TAC CGG ATA TTA CAA AAA GAG TTT TTC TTT TAC ATT	6619
Met Ser Asp Ile Tyr Arg Ile Leu Gln Lys Glu Phe Phe Phe Tyr Ile	
455 460 465 470	
GCG TGG CTC CAG AGG GTT GCA ACA CAC GCA AAT TTC TGT TTA AAC ATT	6667
Ala Trp Leu Gln Arg Val Ala Thr His Ala Asn Phe Cys Leu Asn Ile	

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475	480	485	
CTG AAG AGA AGC GTG GAT ACG GGG GCC CCG CCA TTT TTG TTC AGG GCC 6715 Leu Lys Arg Ser Val Asp Thr Gly Ala Pro Pro Phe Leu Phe Arg Ala 490 495 500			
AGC TCG GAG AAG CCG CTG CAG CAG TTA AAT AAA ATG CTC TGC CCC CTT 6763 Ser Ser Glu Lys Arg Leu Gln Gln Leu Asn Lys Met Leu Cys Pro Leu 505 510 515			
CTC GTG CCG ATT CAA TAT GAA GAC TTT TCG AAG GCC ATG GGG TCT GAG 6811 Leu Val Pro Ile Gln Tyr Glu Asp Phe Ser Lys Ala Met Gly Ser Glu 520 525 530			
CTC AAG AGG GAA AAG TTA GAG ACA TTC GTT AAA GCT ATT TCC AGC GAC 6859 Leu Lys Arg Glu Lys Leu Glu Thr Phe Val Lys Ala Ile Ser Ser Asp 535 540 545 550			
AGG GAC CCG AGG GGG TCC TTA AGA TTT CTC ATT TCG GAC CAT GCA AGG 6907 Arg Asp Pro Arg Gly Ser Leu Arg Phe Leu Ile Ser Asp His Ala Arg 555 560 565			
GAA ATT ATT GCA GAC GGA GTA CGG TTT AAG CCG GTG ATA GAC GAG CCG 6955 Glu Ile Ile Ala Asp Gly Val Arg Phe Lys Pro Val Ile Asp Glu Pro 570 575 580			
GTT CGG GCT TCA GTT GCG CTG AGT ACC GCT GCC GCT GGG AAA GTG AAA 7003 Val Arg Ala Ser Val Ala Leu Ser Thr Ala Ala Ala Gly Lys Val Lys 585 590 595			
GCG CGA CGC TTA ACC TCA GTT CGC GCG CCC GTA CCG GGC GCA GGC GCC 7051 Ala Arg Arg Leu Thr Ser Val Arg Ala Pro Val Pro Gly Ala Gly Ala 600 605 610			
GTT TCC GCG CGC CGG AAA TCG GAA ATA TGA TAAAAATGCT TGGCATTGTC 7101 Val Ser Ala Arg Arg Lys Ser Glu Ile 615 620			
GGGCGAAGAG GCGTGATCTG AAGGGCTCCA CAATGACGTA ACTGAGCTAC GCATCCCTAT 7161			
AAAGTGATACC CGCTGACCGC TAGCCCATAC AGTGTTACAG GAGGGGAGAG AGACAACTTC 7221			
AGCTCGAAGT CTGAAGAGAC ATC ATG AGC GGC TTC AGT AAC ATA GGA TCG 7271			
Met Ser Gly Phe Ser Asn Ile Gly Ser			
1 5			
ATT GCC ACC GTT TCC CTA GTA TGC TCG CTT TTG TGC GCA TCT GTA TTA 7319 Ile Ala Thr Val Ser Leu Val Cys Ser Leu Leu Cys Ala Ser Val Leu 10 15 20 25			
GGG GCG CCG GTA CTG GAC GGG CTC GAG TCG AGC CCT TTC CCG TTC GGG 7367 Gly Ala Pro Val Leu Asp Gly Leu Glu Ser Ser Pro Phe Pro Phe Gly 30 35 40			
GGC AAA ATT ATA GCC CAG GCG TGC AAC CGC ACC ACG ATT GAG GTG ACG 7415 Gly Lys Ile Ile Ala Gln Ala Cys Asn Arg Thr Thr Ile Glu Val Thr 45 50 55			
GTC CCG TGG AGC GAC TAC TCT GGT CGC ACC GAA GGA GTG TCA GTC GAG 7463 Val Pro Trp Ser Asp Tyr Ser Gly Arg Thr Glu Gly Val Ser Val Glu 60 65 70			
GTG AAA TGG TTC TAC GGG AAT AGT AAT CCC GAA AGC TTC GTG TTC GGG 7511 Val Lys Trp Phe Tyr Gly Asn Ser Asn Pro Glu Ser Phe Val Phe Gly 75 80 85			
GTG GAT AGC GAA ACG GGC AGT GGA CAC GAG GAC CTG TCT ACG TGC TGG 7559 Val Asp Ser Glu Thr Gly Ser Gly His Glu Asp Leu Ser Thr Cys Trp 90 95 100 105			
GCT CTA ATC CAT AAT CTG AAC GCG TCT GTG TGC AGG GCG TCT GAC GCC 7607 Ala Leu Ile His Asn Leu Asn Ala Ser Val Cys Arg Ala Ser Asp Ala 110 115 120			
GGG ATA CCT GAT TTC GAC AAG CAG TGC GAA AAA GTG CAG AGA AGA CTG 7655 Gly Ile Pro Asp Phe Asp Lys Gln Cys Glu Lys Val Gln Arg Arg Leu 125 130 135			

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CGC TCC GGG GTG GAA CTT GGT AGT TAC GTG TCT GGC AAT GGA TCC CTG	7703
Arg Ser Gly Val Glu Leu Gly Ser Tyr Val Ser Gly Asn Gly Ser Leu	
140 145 150	
GTG CTG TAC CCA GGG ATG TAC GAT GCC GGC ATC TAC GCC TAC CAG CTC	7751
Val Leu Tyr Pro Gly Met Tyr Asp Ala Gly Ile Tyr Ala Tyr Gln Leu	
155 160 165	
TCA GTG GGT GGG AAG GGA TAT ACC GGG TCT GTT TAT CTA GAC GTC GGA	7799
Ser Val Gly Gly Lys Gly Tyr Thr Gly Ser Val Tyr Leu Asp Val Gly	
170 175 180 185	
CCA AAC CCC GGA TGC CAC GAC CAG TAT GGG TAC ACC TAT TAC AGC CTG	7847
Pro Asn Pro Gly Cys His Asp Gln Tyr Gly Tyr Thr Tyr Tyr Ser Leu	
190 195 200	
GCC GAC GAG GCG TCA GAC TTA TCA TCT TAT GAC GTA GCC TCG CCC GAA	7895
Ala Asp Glu Ala Ser Asp Leu Ser Ser Tyr Asp Val Ala Ser Pro Glu	
205 210 215	
CTC GAC GGT CCT ATG GAG GAA GAT TAT TCC AAT TGT CTA GAC ATG CCC	7943
Leu Asp Gly Pro Met Glu Glu Asp Tyr Ser Asn Cys Leu Asp Met Pro	
220 225 230	
CCG CTA CGC CCA TGG ACA ACC GTT TGT TCG CAT GAC GTC GAG GAG CAG	7991
Pro Leu Arg Pro Trp Thr Val Cys Ser His Asp Val Glu Glu Gln	
235 240 245	
GAA AAC GCC ACG GAC GAG CTT TAC CTA TGG GAC GAG GAA TGC GCC GGT	8039
Glu Asn Ala Thr Asp Glu Leu Tyr Leu Trp Asp Glu Glu Cys Ala Gly	
250 255 260 265	
CCG CTG GAC GAG TAC GTC GAC GAA AGG TCA GAG ACG ATG CCC AGG ATG	8087
Pro Leu Asp Glu Tyr Val Asp Glu Arg Ser Glu Thr Met Pro Arg Met	
270 275 280	
GTT GTC TTT TCA CCG CCC TCT ACG CTC CAG CAG TAG CCACCCGAGA	8133
Val Val Phe Ser Pro Pro Ser Thr Leu Gln Gln	
285 290	
GTGTTTTTTG TGAGCGCCCA CGCAACATAC CTAACGTGCTT CATTTCTGAT CAATTATTGC	8193
GTATTGAATA AATAAACAGT ACAAAGCAT CAGGTGTGGT TTGCGTGTCT GTGCTAAACC	8253
ATGGCGTGTG CGGTGAAAC CGTAAATTAC GTGATAATAA ATAGCATAGG AGTTGGCGTG	8313
CAGCGTATTT CGCCGAGAGA TGGGGACAAT GTTAGTGTG GGCCTTTTCC TACTTGCACT	8373
AGCGGACGCG GCGTTGCCGA CCGGCAGATT CTGCCGAGTT TGGAGGTGCT CTCCGGGAGG	8433
AACCATCCAA GAGAACCTGG CGGTGCTCGC GGAATCGCCG GTCACGGGAC ACGCGACATA	8493
TCCGCCGCCT GAAGGCGCCG TCAGCTTTCA GATTTTGTGG GACACCCCTA CTTTGCGCAT	8553
TCGTACGGC GCTACGGAGG ACGAACTTGC ACTGGAGCGC GGGACGTCCG CCTCAGACGC	8613
GGACAACTGT ACATTTTTCG TGTCATATCG CCCGCGCCCA GAAATTCACG GAGCATACTT	8673
CACCATAGGG GTATTGCTA CTGGCCAGAG CACGGAAAGC AGCTATTTCG TCATCAGTCG	8733
GGTCTTAGTT AACGCCCTCT TGAACGGTC CGTGCCTCTG GAAACGCCGT GCGATGAAAA	8793
TTTTTTGTCAG AACGAGCCTA CATGGGGCTC GAAGCGTTGG TTAGGCCCCC CGTCGCCTTA	8853
TGTGCGAGAT AACGATGTCG CCGTGTGAC AAAAGCGCAG TACATTGGGG AGTGCTACTC	8913
CAACTCGGCG GCCCAGACGG GGCTCAGTC TCTCAACATG ACCTTTTCTT ATTGCGCTAA	8973
AAGAATAGTA AACGTCACGT GGACAACCGG CGGCCCTCC CCCTCGCGCA TAACGGTATA	9033
CTCGTCGCGG GAGAACGGGC AGCCCGTGT GAGGAACGTT TCTGACGGGT TCTTGCTTAA	9093
GTACACTCCC GACATTGACG GCCGGGCCAT GATAAACGTT ATTGCCAATT ATTCCCGGC	9153
GGACTCCGGC AGCGTCTCTG CGTTTACGGC CTTTAGGGAA GGAAACTCC CATCCGCGAT	9213
TCAACTGCAC CGGATAGATA TGTCGGGAC TGAGCCCGCG GGGACTGAAA CGACCTTCGA	9273
CTGTCAAAAA ATGATAGAAA CCCCCTACCG AGCGCTCGGG AGCAATGTTT CCAGGGACGA	9333

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CTCTATCCGT CCGGGGGCCA CTCTGCCTCC GTTCGATACC GCAGCACCTG ATTTTCGATAC 9393  
 AGGTACTTCC CCGACCCCCA CTACCGTGCC AGAGCCAGCC ATTACTACAC TCATACCGCG 9453  
 CAGCACTAGC GATATGGGAT TCTTCTCCAC GGCACGTGCT ACCGGATCAG AAACCTCTTC 9513  
 GGTACCCGTC CAGGAAACGG ATAGAACTCT TTCGACAACT CCTCTTACCC TTCCACTGAC 9573  
 TCCCGGTGAG TCAGAAAATA CACTGTTTCC TACGACCGCG CCGGGGATTT CTACCGAGAC 9633  
 CCCGAGCGCG GCACATGAAA CTACACAGAC CCAGAGTGCA GAAACGGTGG TCTTTACTCA 9693  
 GAGTCCGAGT ACCGAGTCGG AAACCGCGCG GTCCAGAGT CAGGAACCGT GGTATTTTAC 9753  
 TCAGACTCCG AGTACTGAAC AGGCGGCTCT TACTCAGACG CAGATCGCAG AAACGGAGGC 9813  
 GTTGTTTACT CAGACTCCGA GTGCTGAACA GATGACTTTT ACTCAGACTC CGGGTGCAGA 9873  
 AACCGAGGCA CCTGCCCAGA CCCCGAGCAC GATACCCGAG ATATTTACTC AGTCTCGTAG 9933  
 CACGCCCCC GAAACCGCTC GCGCTCCGAG CGCGCGCCG GAGGTTTTTA CACAGAGTTC 9993  
 GAGTACGGTA ACGGAGGTGT TTA CTCTCAGAC CCCGAGCACG GTACCGAAAA CTACTCTGAG 10053  
 TTCGAGTACT GAACCGCGCA TTTTACTTCG GACTCAGAGC GCGGGAAGT AGGCCTTTAC 10113  
 TCAGACTTCG AGTCCCGAGC CGGACACTAT GCGAACTCAG AGTACTGAAA CACACTTTTT 10173  
 CACTCAGGCC CCGAGTACGG TACCGAAAGC TACTCAGACT CCGAGTACAG AGCCGAGAGT 10233  
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 AACATCGGTC CAGCTAATGT GCCTGTCTGT CACGAGCCAT TCTCCGGAAC CTTACTGTCT 10833  
 TTTCGACACG TCTCTTATAG CGAGGGAAAA AGATATCGCG CCAGAGTTAT ACTTTACCTC 10893  
 TGATCCGCAA ACGGCATACT GCACAATAAC TCTGCCGTCC GCGTGTGTTT CGAGATTGCA 10953  
 ATGGAGCCTT AATAATGTTT CACTGCCGGA ATATTTGACG GCCACGACCG TTGTTTCGCA 11013  
 TACCGCTGGC CAAAGTACAG TGTGGAAGAG CAGCGCGAGA GCAGCGAGG CGTGGATTTC 11073  
 TGGCCGGGGA GGCAATATAT ACGAATGCAC CGTCCTCATC TCAGACGGCA CTCGCGTTAC 11133  
 TACGCGAAAG GAGAGGTGCT TAACAAACAC ATGGATTGCG GTGGAAAAAG GTGCTGCTCA 11193  
 GGCGCAGCTG TATTCACICT TTTCTGGACT TGTGTCAGGA TTATGCGGGA GCATATCTGC 11253  
 TTTGTACGCA ACGCTATGGA CCGCCATTTA TTTTGAAGGA ATGCTTTTGG GACTATCGTA 11313  
 CTGCTTTCTT CCTTCGCTAG CCAGAGCACC GCCGCCGTCA CGTACGACTA CATTTTAGGC 11373  
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 AGGGTATCAA GAGGCTGCGA CGTTGTCGAG CTCAACCCGA TTTCTAACGT GGACGACATG 11493  
 ATATCGGCGG CCAAAGAAAA AGAGAAGGGG GGCCCTTTTC AGGCCTCCGT CGTCTGGTTC 11553  
 TACGTGATTA AGGGCGACGA CGGCGAGGAC AAGTACTGTC CAATCTATAG AAAAGAGTAC 11613  
 AGGGAATGTG GCGACGTACA ACTGCTATCT GAATGCGCCG TTCAATCTGC ACAGATGTGG 11673

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GCAGTGGACT ATGTTCTAG CACCCCTGTA TCGCGAAATG GCGCGGGACT GACTATATTC	11733
TCCCCCACTG CTGCGCTCTC TGCCCAATAC TTGCTGACCC TGAAAAATCGG GAGATTGCG	11793
CAAACAGCTC TCGTAACCTCT AGAAGTTAAC GATCGCTGTT TAAAGATCGG GTCGCAGCTT	11853
AACTTTTATC CGTCGAAATG CTGGACAACA GAACAGTATC AGACTGGATT TCAAGCGCAA	11913
CACCTTTATC CGATCGCAGA CACCAATACA CGACACGCGG ACGACGTATA TCGGGGATAC	11973
GAAGATATTC TGCAGCGCTG GAATAATTTG CTGAGGAAAA AGAATCCTAG CGCGCCAGAC	12033
CCTCGTCCAG ATAGCGTCCC GCAAGAAATT CCCGCTGTAA CCAAGAAAGC GGAAGGGCGC	12093
ACCCCGGACG CAGAAAGCAG CGAAAAGAAG GCCCCTCCAG AAGACTCGGA GGACGACATG	12153
CAGGCAGAGG CTTCTGGAGA AAATCCTGCC GCCCTCCCCG AAGACGACGA AGTCCCGGAG	12213
GACACCGAGC ACGATGATCC AAACCTCGGAT CCTGACTATT ACAATGACAT GCCCGCCGTG	12273
ATCCCGGTGG AGGAGACTAC TAAAAGTTCT AATGCCGTCT CCATGCCCAT ATTCGCGGCG	12333
TTCGTAGCCT GCGCGGTGCG GCTCGTGGGG CTACTGGTTT GGAGCATCGT AAAATGCGCG	12393
CGTAGCTAAT CGAGCCTAGA ATAGGTGGTT TCTTCCTACA TGCCACGCCT CACGCTCATA	12453
AATATAAATC ACATGGAATA GCATACCAAT GCCTATTTCAT TGGGACGTTT GAAAAGC	12510
ATG GCA TCG CTA CTT GGA ACT CTG GCT CTC CTT GCC GCG ACG	12552
Met Ala Ser Leu Leu Gly Thr Leu Ala Leu Leu Ala Ala Thr	
1 5 10	
CTC GCA CCC TTC GGC GCG ATG GGA ATC GTG ATC ACT GGA AAT CAC GTC	12600
Leu Ala Pro Phe Gly Ala Met Gly Ile Val Ile Thr Gly Asn His Val	
15 20 25 30	
TCC GCC AGG ATT GAC GAC GAT CAC ATC GTG ATC GTC GCG CCT CGC CCC	12648
Ser Ala Arg Ile Asp Asp His Ile Val Ile Val Ala Pro Arg Pro	
35 40 45	
GAA GCT ACA ATT CAA CTG CAG CTA TTT TTC ATG CCT GGC CAG AGA CCC	12696
Glu Ala Thr Ile Gln Leu Gln Leu Phe Phe Met Pro Gly Gln Arg Pro	
50 55 60	
CAC AAA CCC TAC TCA GGA ACC GTC GCG GTC GCG TTT CGG TCT GAT ATA	12744
His Lys Pro Tyr Ser Gly Thr Val Arg Val Ala Phe Arg Ser Asp Ile	
65 70 75	
ACA AAC CAG TGC TAC CAG GAA CTT AGC GAG GAG CGC TTT GAA AAT TGC	12792
Thr Asn Gln Cys Tyr Gln Glu Leu Ser Glu Glu Arg Phe Glu Asn Cys	
80 85 90	
ACT CAT CGA TCG TCT TCT GTT TTT GTC GGC TGT AAA GTG ACC GAG TAC	12840
Thr His Arg Ser Ser Ser Val Phe Val Gly Cys Lys Val Thr Glu Tyr	
95 100 105 110	
ACG TTC TCC GCC TCG AAC AGA CTA ACC GGA CCT CCA CAC CCG TTT AAG	12888
Thr Phe Ser Ala Ser Asn Arg Leu Thr Gly Pro Pro His Pro Phe Lys	
115 120 125	
CTC ACT ATA CGA AAT CCT CGT CCG AAC GAC AGC GGG ATG TTC TAC GTA	12936
Leu Thr Ile Arg Asn Pro Arg Pro Asn Asp Ser Gly Met Phe Tyr Val	
130 135 140	
ATT GTT CGG CTA GAC GAC ACC AAA GAA CCC ATT GAC GTC TTC GCG ATC	12984
Ile Val Arg Leu Asp Asp Thr Lys Glu Pro Ile Asp Val Phe Ala Ile	
145 150 155	
CAA CTA TCG GTG TAT CAA TTC GCG AAC ACC GCC GCG ACT CGC GGA CTC	13032
Gln Leu Ser Val Tyr Gln Phe Ala Asn Thr Ala Ala Thr Arg Gly Leu	
160 165 170	
TAT TCC AAG GCT TCG TGT CGC ACC TTC GGA TTA CCT ACC GTC CAA CTT	13080
Tyr Ser Lys Ala Ser Cys Arg Thr Phe Gly Leu Pro Thr Val Gln Leu	
175 180 185 190	
GAG GCC TAT CTC AGG ACC GAG GAA AGT TGG CGC AAC TGG CAA GCG TAC	13128
Glu Ala Tyr Leu Arg Thr Glu Glu Ser Trp Arg Asn Trp Gln Ala Tyr	
195 200 205	



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GTT GCC ACG GAG GCC ACG ACG ACC AGC GCC GAG GCG ACA ACC CCG ACG	13176
Val Ala Thr Glu Ala Thr Thr Thr Ser Ala Glu Ala Thr Thr Pro Thr	
210 215 220	
CCC GTC ACT GCA ACC AGC GCC TCC GAA CTT GAA GCG GAA CAC TTT ACC	13224
Pro Val Thr Ala Thr Ser Ala Ser Glu Leu Glu Ala Glu His Phe Thr	
225 230 235	
TTT CCC TGG CTA GAA AAT GGC GTG GAT CAT TAC GAA CCG ACA CCC GCA	13272
Phe Pro Trp Leu Glu Asn Gly Val Asp His Tyr Glu Pro Thr Pro Ala	
240 245 250	
AAC GAA AAT TCA AAC GTT ACT GTC CGT CTC GGG ACA ATG AGC CCT ACG	13320
Asn Glu Asn Ser Asn Val Thr Val Arg Leu Gly Thr Met Ser Pro Thr	
255 260 265 270	
CTA ATT GGG GTA ACC GTG GCT GCC GTC GTG AGC GCA ACG ATC GGC CTC	13368
Leu Ile Gly Val Thr Val Ala Ala Val Val Ser Ala Thr Ile Gly Leu	
275 280 285	
GTC ATT GTA ATT TCC ATC GTC ACC AGA AAC ATG TGC ACC CCG CAC CGA	13416
Val Ile Val Ile Ser Ile Val Thr Arg Asn Met Cys Thr Pro His Arg	
290 295 300	
AAA TTA GAC ACG GTC TCG CAA GAC GAC GAA GAA CGT TCC CAA ACT AGA	13464
Lys Leu Asp Thr Val Ser Gln Asp Glu Glu Arg Ser Gln Thr Arg	
305 310 315	
AGG GAA TCG CGA AAA TTT GGA CCC ATG GTT GCG TGC GAA ATA AAC AAG	13512
Arg Glu Ser Arg Lys Phe Gly Pro Met Val Ala Cys Glu Ile Asn Lys	
320 325 330	
GGG GCT GAC CAG GAT AGT GAA CTT GTG GAA CTG GTT GCG ATT GTT AAC	13560
Gly Ala Asp Gln Asp Ser Glu Leu Val Glu Leu Val Ala Ile Val Asn	
335 340 345 350	
CCG TCT GCG CTA AGC TCG CCC GAC TCA ATA AAA ATG TGA TTAAGTCTGA	13609
Pro Ser Ala Leu Ser Ser Pro Asp Ser Ile Lys Met	
355 360	
ATGTGGCTCT CCAATCATTT CGATTCTCTA ATCTCCCAAT CCTCTCAAAA GGGGCAGTAT	13669
CGGACACGGA CTGGGAGGGG CGTACACGAT AGTTATATGG TACAGCAGAG GCCTCTGAAC	13729
ACTTAGGAGG AGAATTCAGC CGGGGAGAGC CCCTGTTGAG TAGGCTTGGG AGCATATTGC	13789
AGG ATG AAC ATG TTA GTG ATA GTT CTC GCC TCT TGT CTT GCG CGC CTA	13837
Met Asn Met Leu Val Ile Val Leu Ala Ser Cys Leu Ala Arg Leu	
1 5 10 15	
ACT TTT GCG ACG CGA CAC GTC CTC TTT TTG GAA GGC ACT CAG GCT GTC	13885
Thr Phe Ala Thr Arg His Val Leu Phe Leu Glu Gly Thr Gln Ala Val	
20 25 30	
CTC GGG GAA GAT GAT CCC AGA AAC GTT CCG GAA GGG ACT GTA ATC AAA	13933
Leu Gly Glu Asp Asp Pro Arg Asn Val Pro Glu Gly Thr Val Ile Lys	
35 40 45	
TGG ACA AAA GTC CTG CGG AAC GCG TGC AAG ATG AAG GCG GCC GAT GTC	13981
Trp Thr Lys Val Leu Arg Asn Ala Cys Lys Met Lys Ala Ala Asp Val	
50 55 60	
TGC TCT TCG CCT AAC TAT TGC TTT CAT GAT TTA ATT TAC GAC GGA GGA	14029
Cys Ser Ser Pro Asn Tyr Cys Phe His Asp Leu Ile Tyr Asp Gly Gly	
65 70 75	
AAG AAA GAC TGC CCG CCC GCG GGA CCC CTG TCT GCA AAC CTG GTA ATT	14077
Lys Lys Asp Cys Pro Pro Ala Gly Pro Leu Ser Ala Asn Leu Val Ile	
80 85 90 95	
TTA CTA AAG CGC GGC GAA AGC TTC GTC GTG CTG GGT TCT GGG CTA CAC	14125
Leu Leu Lys Arg Gly Glu Ser Phe Val Val Leu Gly Ser Gly Leu His	
100 105 110	
AAC AGC AAT ATA ACT AAT ATC ATG TGG ACA GAG TAC GGA GGC CTG CTC	14173
Asn Ser Asn Ile Thr Asn Ile Met Trp Thr Glu Tyr Gly Gly Leu Leu	
115 120 125	

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TTT	GAT	CCT	GTA	ACT	CGT	TCG	GAC	GAG	GGA	ATC	TAT	TTT	CGA	CGG	ATC	14221
Phe	Asp	Pro	Val	Thr	Arg	Ser	Asp	Glu	Gly	Ile	Tyr	Phe	Arg	Arg	Ile	
	130						135					140				
TCT	CAG	CCA	GAT	CTG	GCC	ATG	GAA	ACT	ACA	TCG	TAC	AAC	GTC	AGC	GTT	14269
Ser	Gln	Pro	Asp	Leu	Ala	Met	Glu	Thr	Thr	Ser	Tyr	Asn	Val	Ser	Val	
	145					150					155					
CTT	TCG	CAC	GTA	GAC	GAG	AAG	GCT	CCA	GCA	CCG	CAC	GAG	GTG	GAG	ATA	14317
Leu	Ser	His	Val	Asp	Glu	Lys	Ala	Pro	Ala	Pro	His	Glu	Val	Glu	Ile	
160				165						170					175	
GAC	ACC	ATC	AAG	CCG	TCA	GAG	GCC	CAC	GCG	CAC	GTG	GAA	TTA	CAA	ATG	14365
Asp	Thr	Ile	Lys		Ser	Glu	Ala	His	Ala	His	Val	Glu	Leu	Gln	Met	
			180						185					190		
CTG	CCG	TTT	CAT	GAA	CTC	AAC	GAC	AAC	AGC	CCC	ACC	TAT	GTG	ACC	CCT	14413
Leu	Pro	Phe	His	Glu	Leu	Asn	Asp	Asn	Ser	Pro	Thr	Tyr	Val	Thr	Pro	
		195						200					205			
GTT	CTT	AGA	GTC	TTC	CCA	CCG	ACC	GAG	CAC	GTA	AAA	TTT	AAC	GTT	ACG	14461
Val	Leu	Arg	Val	Phe	Pro	Pro	Thr	Glu	His	Val	Lys	Phe	Asn	Val	Thr	
	210						215					220				
TAT	TCG	TGG	TAT	GGG	TTT	GAT	GTC	AAA	GAG	GAG	TGC	GAA	GAA	GTG	AAA	14509
Tyr	Ser	Trp	Tyr	Gly	Phe	Asp	Val	Lys	Glu	Glu	Cys	Glu	Glu	Val	Lys	
	225					230					235					
CTG	TTC	GAG	CCG	TGC	GTA	TAC	CAT	CCT	ACA	GAC	GGC	AAA	TGT	CAG	TTT	14557
Leu	Phe	Glu	Pro	Cys	Val	Tyr	His	Pro	Thr	Asp	Gly	Lys	Cys	Gln	Phe	
240					245					250					255	
CCC	GCA	ACC	AAC	CAG	AGA	TGC	CTC	ATA	GGA	TCT	GTC	TTG	ATG	GCG	GAA	14605
Pro	Ala	Thr	Asn	Gln	Arg	Cys	Leu	Ile	Gly	Ser	Val	Leu	Met	Ala	Glu	
				260					265					270		
TTC	TTG	GGC	GCG	GCC	TCT	TTG	CTG	GAT	TGT	TCC	CGC	GAT	ACT	CTA	GAA	14653
Phe	Leu	Gly	Ala	Ala	Ser	Leu	Leu	Asp	Cys	Ser	Arg	Asp	Thr	Leu	Glu	
		275						280					285			
GAC	TGC	CAC	GAA	AAT	CGC	GTG	CCG	AAC	CTA	CGG	TTC	GAT	TCG	CGA	CTC	14701
Asp	Cys	His	Glu	Asn	Arg	Val	Pro	Asn	Leu	Arg	Phe	Asp	Ser	Arg	Leu	
		290						295				300				
TCC	GAG	TCA	CGC	GCA	GCC	CTG	GTG	ATC	AGT	CCT	CTT	ATA	GCC	ATC	CCC	14749
Ser	Glu	Ser	Arg	Ala	Gly	Leu	Val	Ile	Ser	Pro	Leu	Ile	Ala	Ile	Pro	
	305					310						315				
AAA	GTT	TTG	ATT	ATA	GTC	GTT	TCC	GAC	GGA	GAC	ATT	TTG	GGA	TGG	AGC	14797
Lys	Val	Leu	Ile	Ile	Val	Val	Ser	Asp	Gly	Asp	Ile	Leu	Gly	Trp	Ser	
320					325					330					335	
TAC	ACG	GTG	CTC	GGG	AAA	CGT	AAC	AGT	CCG	CGC	GTA	GTA	GTC	GAA	ACG	14845
Tyr	Thr	Val	Leu	Gly	Lys	Arg	Asn	Ser	Pro	Arg	Val	Val	Val	Glu	Thr	
				340					345					350		
CAC	ATG	CCC	TCG	AAG	GTC	CCG	ATG	AAC	AAA	GTA	GTA	ATT	GGC	AGT	CCC	14893
His	Met	Pro	Ser	Lys	Val	Pro	Met	Asn	Lys	Val	Val	Ile	Gly	Ser	Pro	
			355					360					365			
GGA	CCA	ATG	GAC	GAA	ACG	GGT	AAC	TAT	AAA	ATG	TAC	TTC	GTC	GTC	GCG	14941
Gly	Pro	Met	Asp	Glu	Thr	Gly	Asn	Tyr	Lys	Met	Tyr	Phe	Val	Val	Ala	
		370					375					380				
GGG	GTG	GCC	GCG	ACG	TGC	GTA	ATT	CTT	ACA	TGC	GCT	CTG	CTT	GTG	GGG	14989
Gly	Val	Ala	Ala	Thr	Cys	Val	Ile	Leu	Thr	Cys	Ala	Leu	Leu	Val	Gly	
	385					390					395					
AAA	AAG	AAG	TGC	CCC	GCG	CAC	CAA	ATG	GGT	ACT	TTT	TCC	AAG	ACC	GAA	15037
Lys	Lys	Lys	Cys	Pro	Ala	His	Gln	Met	Gly	Thr	Phe	Ser	Lys	Thr	Glu	
400					405					410					415	
CCA	TTG	TAC	GCG	CCG	CTC	CCC	AAA	AAC	GAG	TTT	GAG	GCC	GCG	GGG	CTT	15085
Pro	Leu	Tyr	Ala	Pro	Leu	Pro	Lys	Asn	Glu	Phe	Glu	Ala	Gly	Gly	Leu	
				420					425					430		
ACG	GAC	GAT	GAG	GAA	GTG	ATT	TAT	GAC	GAA	GTA	TAC	GAA	CCC	CTA	TTT	15133
Thr	Asp	Asp	Glu	Glu	Val	Ile	Tyr	Asp	Glu	Val	Tyr	Glu	Pro	Leu	Phe	
			435					440					445			

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CGC GGC TAC TGT AAG CAG GAA TTC CGC GAA GAT GTG AAT ACC TTT TTC	15181
Arg Gly Tyr Cys Lys Gln Glu Phe Arg Glu Asp Val Asn Thr Phe Phe	
450 455 460	
GGT GCG GTC GTG GAG GGA GAA AGG GCC TTA AAC TTT AAA TCC GCC ATC	15229
Gly Ala Val Val Glu Gly Glu Arg Ala Leu Asn Phe Lys Ser Ala Ile	
465 470 475	
GCA TCA ATG GCA GAT CGC ATC CTG GCA AAT AAA AGC GGC AGA AGG AAT	15277
Ala Ser Met Ala Asp Arg Ile Leu Ala Asn Lys Ser Gly Arg Arg Asn	
480 485 490 495	
ATG GAT AGC TAT TAG TTGGTC ATG CCT TTT AAG ACC AGA GGG GCC GAA	15325
Met Asp Ser Tyr . Met Pro Phe Lys Thr Arg Gly Ala Glu	
500 1 5	
GAC GCG GCC GCG GGC AAG AAC AGG TTT AAG AAA TCG AGA AAT CGG GAA	15373
Asp Ala Ala Ala Gly Lys Asn Arg Phe Lys Lys Ser Arg Asn Arg Glu	
10 15 20 25	
ATC TTA CCG ACC AGA CTG CGT GGC ACC GGT AAG AAA ACT GCC GGA TTG	15421
Ile Leu Pro Thr Arg Leu Arg Gly Thr Lys Lys Thr Ala Gly Leu	
30 35 40	
TCC AAT TAT ACC CAG CCT ATT CCC TGG AAC CCT AAA TTC TGC AGC GCG	15469
Ser Asn Tyr Thr Gln Pro Ile Pro Trp Asn Pro Lys Phe Cys Ser Ala	
45 50 55	
CGC GGG GAA TCT GAC AAC CAC GCG TGT AAA GAC ACT TTT TAT CGC AGG	15517
Arg Gly Glu Ser Asp Asn His Ala Cys Lys Asp Thr Phe Tyr Arg Arg	
60 65 70	
ACG TGC TGC GCA TCG CGC TCT ACC GTT TCC AGT CAA CCC GAT TCC CCC	15565
Thr Cys Cys Ala Ser Arg Ser Thr Val Ser Ser Gln Pro Asp Ser Pro	
75 80 85	
CAC ACA CCC ATG CCT ACT GAG TAT GGG CGC GTG CCC TCC GCA AAG CGC	15613
His Thr Pro Met Pro Thr Glu Tyr Gly Arg Val Pro Ser Ala Lys Arg	
90 95 100 105	
AAA AAA CTA TCA TCT TCA GAC TGC GAG GGC GCG CAC CAA CCC CTA GTA	15661
Lys Lys Leu Ser Ser Ser Asp Cys Glu Gly Ala His Gln Pro Leu Val	
110 115 120	
TCC TGT AAA CTT CCG GAT TCT CAA GCA GCA CCG GCG CGA ACC TAT AGT	15709
Ser Cys Lys Leu Pro Asp Ser Gln Ala Ala Pro Ala Arg Thr Tyr Ser	
125 130 135	
TCT GCG CAA AGA TAT ACT GTT GAC GAG GTT TCG TCG CCA ACT CCG CCA	15757
Ser Ala Gln Arg Tyr Thr Val Asp Glu Val Ser Ser Pro Thr Pro Pro	
140 145 150	
GGC GTC GAC GCT GTT GCG GAC TTA GAA ACG CGC GCG GAA CTT CCT GGC	15805
Gly Val Asp Ala Val Ala Asp Leu Glu Thr Arg Ala Glu Leu Pro Gly	
155 160 165	
GCT ACG ACG GAA CAA ACG GAA AGT AAA AAT AAG CTC CCC AAC CAA CAA	15853
Ala Thr Thr Glu Gln Thr Glu Ser Lys Asn Lys Leu Pro Asn Gln Gln	
170 175 180 185	
TCG CGC CTG AAG CCG AAA CCC ACA AAC GAG CAC GTC GGA GGG GAG CGG	15901
Ser Arg Leu Lys Pro Lys Pro Thr Asn Glu His Val Gly Gly Glu Arg	
190 195 200	
TGC CCC TCC GAA GGC ACG GTC GAG GCG CCA TCG CTC GGC ATC CTC TCG	15949
Cys Pro Ser Glu Gly Thr Val Glu Ala Pro Ser Leu Gly Ile Leu Ser	
205 210 215	
CGC GTC GGG GCA GCG ATA GCA AAC GAG CTG GCT CGT ATG CGG AGG GCG	15997
Arg Val Gly Ala Ala Ile Ala Asn Glu Leu Ala Arg Met Arg Arg Ala	
220 225 230	
TGT CTT CCG CTC GCC GCG TCG GCG GCC GCT GCC GGA ATA GTG GCC TGG	16045
Cys Leu Pro Leu Ala Ala Ser Ala Ala Ala Gly Ile Val Ala Trp	
235 240 245	
GCC GCG GCG AGG GCC TTG CAG AAA CAA GCG CGG TAG CAGTAATAAT	16091
Ala Ala Ala Arg Ala Leu Gln Lys Gln Gly Arg	

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250	255	260	
AACCACACAA ATATTGACAA TAATAAACGC GTACGCGG ATG AGT AAG TGT TAT			16144
		Met Ser Lys Cys Tyr 1 5	
TGT CTC GCG CGC CAT CTT TAT AAA AGC CCG CGT TGC GTG GGC CGG CGG			16192
Cys Leu Ala Arg His Leu Tyr Lys Ser Pro Arg Cys Val Gly Arg Arg	10	15 20	
GTA GCA TTT GGA GGG TTG GCG ACC ATG TCG AGA CCT CCG ACG TCA CAT			16240
Val Ala Phe Gly Gly Leu Ala Thr Met Ser Arg Pro Pro Thr Ser His	25	30 35	
TTG GAC TTA GCT TTC TCG GCG GCC TTT AGG GGC ACG GAC CTG CCC GGA			16288
Leu Asp Phe Ala Phe Ser Ala Ala Phe Arg Gly Thr Asp Leu Pro Gly	40	45 50	
GGG AGA TTC TGG CCG GCG TCG CAG AGT TGC GAT ATT TTC TTT TGG CCC			16336
Gly Arg Phe Trp Arg Ala Ser Gln Ser Cys Asp Ile Phe Phe Trp Pro	55	60 65	
GAT CTG GCC GCG GTG ATC GTA CAG GCC GCC CGC GCG TAT TTT GAA GGG			16384
Asp Leu Ala Ala Val Ile Val Gln Ala Ala Arg Ala Tyr Phe Glu Gly	70	75 80 85	
AAG GAA AGG CTG GGC AGT CTG CAG GTC GCC GAA GAT ATC ACG GCG CAC			16432
Lys Glu Arg Leu Gly Ser Leu Gln Val Ala Glu Asp Ile Thr Ala His	90	95 100	
GAC CCG CGA ATA GCG CCC GCG GCT AAG CGC GCC GTC GCA GCG GCG GTA			16480
Asp Pro Arg Ile Ala Pro Ala Ala Lys Arg Ala Val Ala Ala Val	105	110 115	
GGA CTG TGG ACC GCG CTG TCG GAG TTA GTT GGG GGG CCG AAC GGG GAG			16528
Gly Leu Trp Thr Ala Leu Ser Glu Leu Val Gly Gly Pro Asn Gly Glu	120	125 130	
TTG GAA AGC AAG GTC TGG GGC AAG CAG ATT CCC CGG GCC GCC GCG TGG			16576
Leu Glu Ser Lys Val Trp Gly Lys Gln Ile Pro Arg Ala Ala Ala Trp	135	140 145	
GAA ATA AGA GAC GTG CCC AAA GTT CCA GTC ATT GGG CCG GAC ATT CTT			16624
Glu Ile Arg Asp Val Pro Lys Val Pro Val Ile Gly Pro Asp Ile Leu	150	155 160 165	
TCT TTT TTC TCC GCC GCG GTC GAG CTG CCG GTG CTC TAT ATC AGA GCC			16672
Ser Phe Phe Ser Ala Ala Val Glu Leu Pro Val Leu Tyr Ile Arg Ala	170	175 180	
CGG GGA GGG GCG CAC TCG CGG TCC GCG CAC TGG AAT AAC CAG AGC AGC			16720
Arg Gly Gly Ala His Ser Arg Ser Ala His Trp Asn Asn Gln Ser Ser	185	190 195	
GCG CCG GCC GCC GGA CTC GCG GCG ATA AGG ATA GGC ATG GAG ATG GTG			16768
Ala Pro Ala Ala Gly Leu Ala Ala Ile Arg Ile Gly Met Glu Met Val	200	205 210	
CGG AGC CTC CTG GTG ATA GCG CTG CCT CTG TCA AAC TTC ACC CTC CCG			16816
Arg Ser Leu Leu Val Ile Ala Leu Pro Leu Ser Asn Phe Thr Leu Pro	215	220 225	
GAA GAC CTC CCC GAA GGT TCC CAA AAC TCG ATC CGC GCG TTC GTG GCC			16864
Glu Asp Leu Pro Glu Gly Ser Gln Asn Ser Ile Arg Ala Phe Val Ala	230	235 240 245	
CAC CTC ATG AAC TGT GTA GCT ACC GAT AAG ATC ATG TCT CCG GAC GTG			16912
His Leu Met Asn Cys Val Ala Thr Asp Lys Ile Met Ser Pro Asp Val	250	255 260	
CGC GTC CCA GTC GAA GAA AGC TTT TAC AGC CAC TGT TTA AGG GAA ATC			16960
Arg Val Pro Val Glu Glu Ser Phe Tyr Ser His Cys Leu Arg Glu Ile	265	270 275	
ATT ATG TGC GAG AGA GCT TTT TGT TAC CCG TGC AAT CCC CCG CCA AAA			17008
Ile Met Cys Glu Arg Ala Phe Cys Tyr Pro Cys Asn Pro Pro Pro Lys	280	285 290	

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TGG TGA GCTCAGGGTC CCATTATCCC CCGCAACACC CTCTCGCCGC CAGGGCGCGC 17064  
Trp  
295

GCTCTATCTT TCTCTATGTC CCGTCGCCAC CGGCCTAACC GAACGGTGA ACGGGGCCGC 17124  
CCGGAAAGC CTAGCTCCGC ACAGACACAG ACAGACAAAC GGCCTCTCGA TTGCAACAAC 17184  
GTGAAAAACA CACAATAATA TTAATTATAT TATTTTCGAG CGCTCGCGTG TCGCTCGTTT 17244  
CTGGGGGGG GGGGGGGTTG TGTTCGCTG CCGCGGAGTG GGTGAGGGG GAGAGTGGAC 17304  
GGAGGACAGT GTAAAAACCC GCGAGGTTGT CAGGGACGCG GAGGTAAGGA AGCCGCTAGA 17364  
GGGCGTCATT CTCCCGTCAA CGGCGCCGCG CCAGCGCCAG CGCGATTCCA GCGTCCTCG 17424  
CAAAGATCGA GCGGCTCACT TCGGGAGAGT TGGCGGCAGC CGCGCCGGCG CGCAAGGCGG 17484  
CCAGGTATTC GCGACGGCGC ATCTCCGATT GCGGGACTCT CCCCGTCCCG ACGCAGAAAA 17544  
GACTCTGCAC GTAAATCGAG TCGTACAAAC ACGCTTCGCG GCACGGCCGA GGGTGCCACA 17604  
AGCAGCACCA GTGCCCCGCC GCCAGGAGAG ACCGGGAGGT CTCTCGCTCG GCGGACGCGA 17664  
GGTCGGCCGG CAGGTGTGCG GACAGCCAGG ATAACAGTTC TTTCTCGATC ACGAAACGCA 17724  
TATTCTCGCT CTGCATGGTA CGGCTCTCGT CCTCGAAGCG GTCACCGTCC AGAGAGTCGA 17784  
GCCAGAAATC GCCCTCGATC CCTTCCATTG CCTCCTCTAA TTCTCCCAAC CCGTTGCCGT 17844  
TATTCGGGTC AGTGGGGGAG TTGGCGACGC TCTCCGTGCA CGCCACCGC GGCCTCAAAC 17904  
CTAGGCCCGC CGTCGCCCGG CTGGCCCCCA GAAAAGCCGA ACGTAGCCGT TCGTTGGCAG 17964  
CAATCAGCGC GTTCGGCGG TCTCTCGCTG ACGTGAATC TCCGTAACCG TCCTTGAGTT 18024  
CGGACGATAT CTCGACTAAC TCGCGCCAGA GCCGCGAGGC GATCCGAATG CACGGGTCTA 18084  
CCGAGTCGGC CGACTCCGAC GAGGCGACAG CGGCACCTTG CCGCCTGCGC TCGCCACGAG 18144  
GTACCGCGTG CGCAGTAATG TGATCGCTGT CCATCAGCGC CAGCGGGTAG CACCCGTCGA 18204  
GCATGTTTTC CATTTAGGGA TGTGTCTAGA GGAGAGCGGT CCGGGCGGTC TACTGCGGTT 18264  
GTGCTGGGCC GAGTTGGACG GCTACGGATT GCGCCGGGCG TGAAGGGGGG GGGGCGGCGG 18324  
GATGTCCGGC GGTGCGAAAG GGGCGCGCGT CCGCTTCTGC GTGAAGGCTG AGCGGGAAAG 18384  
AAGTTCTGGA TGAGAAATGA TCGAGCGGGC AATAAATGTC CAGAGTAGGG GGGTGGGAGG 18444  
GAGGGGAGG TTCTGCCCGC CGTCTCTCT ATCTGCTCGT CGAGGCCCTG GCCTTGCGTC 18504  
GCCGTGCAGG GGTGAGGCC GCTTCTTCTT TTTTACTTCT CTCCTCGGAT TCCTCGTCAG 18564  
AGGAAGAAGA AAATGACAAC CTCCGTCTTT TAAGAGTGCG CCTACCCGCC CTGGCGGCCG 18624  
AAGCCTTCCG TGGGTCTPTG CGGGTGCCGC GCACCGCAAT AACGCACGGA CGCGGGGGAT 18684  
AGCAAATGGC GGGCGGCGCG GAGAGCTGTC GTCAATAAAG TCTAAGTCAG ATTGCGTGGG 18744  
CTCTGACTCG GTGGAGCTGT GTCCCGTGT CTCTCGCCC AAGTCCACTC CCGGCACCC 18804  
AGGCTGCTCT TCCTCCGACT CCGGTCGCT CCAGCTCCTC CCGCGTCCG GTTCTTCGTC 18864  
CTCCGATACG TCCGAAAAGA AAAACTTCTG GGAGAGCTCT TCGGGATCC 18913

## (2) INFORMATION FOR SEQ ID NO:60:

- (i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 278 amino acids  
(B) TYPE: amino acid  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:

Met Glu Asn Met Leu Asp Gly Cys Tyr Pro Leu Ala Leu Met Asp Ser

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1	5	10	15
Asp His Ile Thr Ala His Ala Val	Pro Arg Gly Glu Arg Arg Arg Gln		
20	25	30	
Gly Ala Ala Val Ala Ser Ser Glu Ser Ala Asp Ser Val Asp Pro Cys			
35	40	45	
Ile Arg Ile Ala Ser Arg Leu Trp Arg Glu Leu Val Glu Ile Ser Ser			
50	55	60	
Glu Leu Lys Asp Gly Tyr Gly Glu Phe Thr Ser Ala Arg Asp Arg Arg			
65	70	75	80
Asn Ala Leu Ile Ala Ala Asn Glu Arg Leu Arg Ser Ala Phe Leu Gly			
85	90	95	
Ala Ser Arg Ala Thr Arg Gly Leu Gly Leu Arg Pro Arg Trp Ala Ser			
100	105	110	
Thr Glu Ser Val Ala Asn Ser Pro Thr Asp Pro Asn Asn Gly Asn Gly			
115	120	125	
Leu Gly Glu Leu Glu Glu Ala Met Glu Gly Ile Glu Gly Asp Phe Trp			
130	135	140	
Leu Asp Ser Leu Asp Gly Asp Arg Phe Glu Asp Glu Ser Arg Thr Met			
145	150	155	160
Gln Ser Glu Asn Met Arg Phe Val Ile Glu Lys Glu Leu Leu Ser Trp			
165	170	175	
Leu Ser Arg His Leu Pro Ala Asp Leu Ala Ser Ala Glu Arg Glu Thr			
180	185	190	
Ser Arg Ser Leu Leu Ala Ala Gly His Trp Cys Cys Leu Trp His Pro			
195	200	205	
Arg Pro Cys Arg Glu Ala Cys Leu Tyr Asp Ser Ile Tyr Val Gln Ser			
210	215	220	
Leu Phe Cys Val Gly Thr Gly Arg Val Pro Gln Ser Glu Met Arg Arg			
225	230	235	240
Arg Glu Tyr Leu Ala Ala Leu Arg Ala Gly Ala Ala Ala Ala Asn Ser			
245	250	255	
Pro Glu Val Ser Ala Ser Ile Phe Ala Arg Asp Ala Gly Ile Ala Leu			
260	265	270	
Ala Leu Ala Arg Arg Arg			
275			

## (2) INFORMATION FOR SEQ ID NO:61:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 294 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: protein

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:

Met Ser Lys Cys Tyr Cys Leu Ala Arg His Leu Tyr Lys Ser Pro Arg			
1	5	10	15
Cys Val Gly Arg Arg Val Ala Phe Gly Gly Leu Ala Thr Met Ser Arg			
20	25	30	
Pro Pro Thr Ser His Leu Asp Leu Ala Phe Ser Ala Ala Phe Arg Gly			
35	40	45	
Thr Asp Leu Pro Gly Gly Arg Phe Trp Arg Ala Ser Gln Ser Cys Asp			
50	55	60	
Ile Phe Phe Trp Pro Asp Leu Ala Ala Val Ile Val Gln Ala Ala Arg			
65	70	75	80

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Ala Tyr Phe Glu Gly Lys Glu Arg Leu Gly Ser Leu Gln Val Ala Glu  
85 90 95

Asp Ile Thr Ala His Asp Pro Arg Ile Ala Pro Ala Ala Lys Arg Ala  
100 105 110

Val Ala Ala Ala Val Gly Leu Trp Thr Ala Leu Ser Glu Leu Val Gly  
115 120 125

Gly Pro Asn Gly Glu Leu Glu Ser Lys Val Trp Gly Lys Gln Ile Pro  
130 135 140

Arg Ala Ala Ala Trp Glu Ile Arg Asp Val Pro Lys Val Pro Val Ile  
145 150 155 160

Gly Pro Asp Ile Leu Ser Phe Phe Ser Ala Ala Val Glu Leu Pro Val  
165 170 175

Leu Tyr Ile Arg Ala Arg Gly Gly Ala His Ser Arg Ser Ala His Trp  
180 185 190

Asn Asn Gln Ser Ser Ala Pro Ala Ala Gly Leu Ala Ala Ile Arg Ile  
195 200 205

Gly Met Glu Met Val Arg Ser Leu Leu Val Ile Ala Leu Pro Leu Ser  
210 215 220

Asn Phe Thr Leu Pro Glu Asp Leu Pro Glu Gly Ser Gln Asn Ser Ile  
225 230 235 240

Arg Ala Phe Val Ala His Leu Met Asn Cys Val Ala Thr Asp Lys Ile  
245 250 255

Met Ser Pro Asp Val Arg Val Pro Val Glu Glu Ser Phe Tyr Ser His  
260 265 270

Cys Leu Arg Glu Ile Ile Met Cys Glu Arg Ala Phe Cys Tyr Pro Cys  
275 280 285

Asn Pro Pro Pro Lys Trp  
290

## (2) INFORMATION FOR SEQ ID NO:62:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 229 amino acids  
 (B) TYPE: amino acid  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:

Met Ala Pro Val Lys Val Thr Ile Val Ser Ala Val Asp Ser His Tyr  
1 5 10 15

Lys Leu Pro Asn Ser Arg Phe Glu Leu Ser Asp Ser Gly Trp Lys Glu  
20 25 30

Leu Val His Ala Val Lys Thr Met Ala Ser Tyr Asp Arg Pro Ser Thr  
35 40 45

Leu Ser Val Ile Val Arg Pro Ala Ser Leu Tyr Glu Val Ser Gly Glu  
50 55 60

Leu Phe Ser Leu Pro Arg Met Cys Arg Pro Val Ile Arg Phe Gly Glu  
65 70 75 80

Gly Gly Asp Pro Pro Gly Val Ser Pro Glu Trp Ser Gly Leu Asp Ala  
85 90 95

Gly Phe Tyr His Leu Ser Ser Gly Ala Tyr Ala Ala Lys Glu Phe His  
100 105 110

Leu Trp Val Leu Gly Thr Ala Asp Ile Cys Met Ala Ala Leu Asn Leu  
115 120 125

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Pro	Ala	Pro	Lys	Thr	Phe	Leu	Ile	Thr	Glu	Thr	Gly	Gly	Lys	Asn	Phe
130						135					140				
Glu	Arg	Gly	Val	Glu	Ile	Phe	Leu	Val	Asn	Gly	Asp	Lys	Thr	Thr	Leu
145				150						155					160
Ser	Leu	Ser	His	Pro	Ser	Val	Trp	Thr	Thr	Leu	Ala	Pro	Ser	Ser	Leu
			165						170					175	
Arg	Thr	Pro	Trp	Pro	Tyr	Ser	Thr	Val	Lys	Phe	Leu	Lys	Val	Lys	Pro
		180						185					190		
Asn	Ser	Ala	Ala	Tyr	Cys	Val	Ser	Asp	Ser	Asp	Asp	Gly	Glu	Arg	Gln
		195					200					205			
Pro	Lys	Phe	Phe	Leu	Gly	Ser	Leu	Phe	Lys	Ser	Lys	Lys	Pro	Arg	Ser
	210					215					220				
Pro	Arg	Arg	Arg	Arg											
225															

(2) INFORMATION FOR SEQ ID NO:63:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 476 amino acids  
 (B) TYPE: amino acid  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:

Met	Arg	Phe	Arg	Arg	Ile	Cys	Ser	Arg	Ser	Arg	Ala	Glu	Lys	Arg	Arg
1				5				10						15	
Arg	Thr	Thr	Glu	Asn	Pro	Leu	Thr	Ser	Lys	Arg	Val	Cys	Val	Leu	Asp
			20					25					30		
Ser	Phe	Ser	Arg	Thr	Met	Ser	Leu	Arg	Pro	Tyr	Ala	Glu	Ile	Leu	Pro
		35				40						45			
Thr	Ala	Glu	Gly	Val	Glu	Arg	Leu	Ala	Glu	Leu	Val	Ser	Val	Thr	Met
	50					55					60				
Thr	Glu	Arg	Ala	Glu	Pro	Val	Thr	Glu	Asn	Thr	Ala	Val	Asn	Ser	Ile
	65				70				75					80	
Pro	Pro	Ala	Asn	Glu	Asn	Gly	Gln	Asn	Phe	Ala	Tyr	Ala	Gly	Asp	Gly
			85				90						95		
Pro	Ser	Thr	Thr	Glu	Lys	Val	Asp	Gly	Ser	His	Thr	Asp	Phe	Asp	Glu
		100					105					110			
Ala	Ser	Ser	Asp	Tyr	Ala	Gly	Pro	Val	Pro	Leu	Ala	Gln	Thr	Arg	Leu
		115					120					125			
Lys	His	Ser	Asp	Glu	Phe	Leu	Gln	His	Phe	Arg	Val	Leu	Asp	Asp	Leu
	130					135					140				
Val	Glu	Gly	Ala	Tyr	Gly	Phe	Ile	Cys	Asp	Val	Arg	Arg	Tyr	Thr	Glu
	145				150				155					160	
Glu	Glu	Gln	Arg	Arg	Arg	Gly	Val	Asn	Ser	Thr	Asn	Gln	Gly	Lys	Ser
			165					170						175	
Lys	Cys	Lys	Arg	Leu	Ile	Ala	Lys	Tyr	Val	Lys	Asn	Gly	Thr	Arg	Ala
		180					185						190		
Ala	Ser	Gln	Leu	Glu	Asn	Glu	Ile	Leu	Val	Leu	Gly	Arg	Leu	Asn	His
		195					200					205			
Glu	Asn	Val	Leu	Lys	Ile	Gln	Glu	Ile	Leu	Arg	Tyr	Pro	Asp	Asn	Thr
	210					215					220				
Tyr	Met	Leu	Thr	Gln	Arg	Tyr	Gln	Phe	Asp	Leu	Tyr	Ser	Tyr	Met	Tyr
	225				230				235					240	
Asp	Glu	Ala	Phe	Asp	Trp	Lys	Asp	Ser	Pro	Met	Leu	Lys	Gln	Thr	Arg



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245	250	255
Arg Ile Met Lys Gln Leu Met Ser Ala Val Ser Tyr Ile His Ser Lys 260 265 270		
Lys Leu Ile His Arg Asp Ile Lys Leu Glu Asn Ile Phe Leu Asn Cys 275 280 285		
Asp Gly Lys Thr Val Leu Gly Asp Phe Gly Thr Val Thr Pro Phe Glu 290 295 300		
Asn Glu Arg Glu Pro Phe Glu Tyr Gly Trp Val Gly Thr Val Ala Thr 305 310 315 320		
Asn Ser Pro Glu Ile Leu Ala Arg Asp Ser Tyr Cys Glu Ile Thr Asp 325 330 335		
Ile Trp Ser Cys Gly Val Val Leu Leu Glu Met Val Ser His Glu Phe 340 345 350		
Cys Pro Ile Gly Asp Gly Gly Gly Asn Pro His Gln Gln Leu Leu Lys 355 360 365		
Val Ile Asp Ser Leu Ser Val Cys Asp Glu Glu Phe Pro Asp Pro Pro 370 375 380		
Cys Asn Leu Tyr Asn Tyr Leu His Tyr Ala Ser Ile Asp Arg Ala Gly 385 390 395 400		
His Thr Val Pro Ser Leu Ile Arg Asn Leu His Leu Pro Ala Asp Val 405 410 415		
Glu Tyr Pro Leu Val Lys Met Leu Thr Phe Asp Trp Arg Leu Arg Pro 420 425 430		
Ser Ala Ala Glu Val Leu Ala Met Pro Leu Phe Ser Ala Glu Glu Glu 435 440 445		
Arg Thr Ile Thr Ile Ile His Gly Lys His Lys Pro Ile Arg Pro Glu 450 455 460		
Ile Arg Ala Arg Val Pro Arg Ser Met Ser Glu Gly 465 470 475		

## (2) INFORMATION FOR SEQ ID NO:64:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 623 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: protein

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:

Met Thr Leu Pro His Arg Leu Thr Lys Arg Pro Phe Ala Arg Arg Phe 1 5 10 15
Cys Ser Val Phe Val Ile His Tyr Ser Glu Thr Lys Leu Asp Arg Tyr 20 25 30
Asn Lys Thr Met Leu Leu Tyr Arg Pro Asp Ser Thr Met Arg His Ser 35 40 45
Gly Gly Asp Ala Asn His Arg Gly Ile Arg Pro Arg Arg Lys Ser Ile 50 55 60
Gly Ala Phe Ser Ala Arg Glu Lys Thr Gly Lys Arg Asn Ala Leu Thr 65 70 75 80
Glu Ser Ser Ser Ser Ser Asp Met Leu Asp Pro Phe Ser Thr Asp Lys 85 90 95
Glu Phe Gly Gly Lys Trp Thr Val Asp Gly Pro Ala Asp Ile Thr Ala 100 105 110
Glu Val Leu Ser Gln Ala Trp Asp Val Leu Gln Leu Val Lys His Glu 115 120 125

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Asp Ala Glu Glu Glu Arg Val Thr Tyr Glu Ser Lys Pro Thr Pro Ile  
 130 135 140  
 Gln Pro Phe Asn Ala Trp Pro Asp Gly Pro Ser Trp Asn Ala Gln Asp  
 145 150 155 160  
 Phe Thr Arg Ala Pro Ile Val Tyr Pro Ser Ala Glu Val Leu Asp Ala  
 165 170 175  
 Glu Ala Leu Lys Val Gly Ala Phe Val Ser Arg Val Leu Gln Cys Val  
 180 185 190  
 Pro Phe Thr Arg Ser Lys Lys Ser Val Thr Val Arg Asp Ala Gln Ser  
 195 200 205  
 Phe Leu Gly Asp Ser Phe Trp Arg Ile Met Gln Asn Val Tyr Thr Val  
 210 215 220  
 Val Leu Arg Gln His Ile Thr Arg Leu Arg His Pro Ser Ser Lys Ser  
 225 230 235 240  
 Ile Val Asn Cys Asn Asp Pro Leu Trp Tyr Ala Tyr Ala Asn Gln Phe  
 245 250 255  
 His Trp Arg Gly Met Arg Val Pro Ser Leu Lys Leu Ala Ser Pro Pro  
 260 265 270  
 Glu Glu Asn Ile Gln His Gly Pro Met Ala Ala Val Phe Arg Asn Ala  
 275 280 285  
 Gly Ala Gly Leu Phe Leu Trp Pro Ala Met Arg Ala Ala Phe Glu Glu  
 290 295 300  
 Arg Asp Lys Arg Leu Leu Arg Ala Cys Leu Ser Ser Leu Asp Ile Met  
 305 310 315 320  
 Asp Ala Ala Val Leu Ala Ser Phe Pro Phe Tyr Trp Arg Gly Val Gln  
 325 330 335  
 Asp Thr Ser Arg Phe Glu Pro Ala Leu Gly Cys Leu Ser Glu Tyr Phe  
 340 345 350  
 Ala Leu Val Val Leu Leu Ala Glu Thr Val Leu Ala Thr Met Phe Asp  
 355 360 365  
 His Ala Leu Val Phe Met Arg Ala Leu Ala Asp Gly Asn Phe Asp Asp  
 370 375 380  
 Tyr Asp Glu Thr Arg Tyr Ile Asp Pro Val Lys Asn Glu Tyr Leu Asn  
 385 390 395 400  
 Gly Ala Glu Gly Thr Leu Leu Arg Gly Ile Val Ala Ser Asn Thr Ala  
 405 410 415  
 Leu Ala Val Val Cys Ala Asn Thr Tyr Ser Thr Ile Arg Lys Leu Pro  
 420 425 430  
 Ser Val Ala Thr Ser Ala Cys Asn Val Ala Tyr Arg Thr Glu Thr Leu  
 435 440 445  
 Lys Ala Arg Arg Pro Gly Met Ser Asp Ile Tyr Arg Ile Leu Gln Lys  
 450 455 460  
 Glu Phe Phe Phe Tyr Ile Ala Trp Leu Gln Arg Val Ala Thr His Ala  
 465 470 475 480  
 Asn Phe Cys Leu Asn Ile Leu Lys Arg Ser Val Asp Thr Gly Ala Pro  
 485 490 495  
 Pro Phe Leu Phe Arg Ala Ser Ser Glu Lys Arg Leu Gln Gln Leu Asn  
 500 505 510  
 Lys Met Leu Cys Pro Leu Leu Val Pro Ile Gln Tyr Glu Asp Phe Ser  
 515 520 525  
 Lys Ala Met Gly Ser Glu Leu Lys Arg Glu Lys Leu Glu Thr Phe Val  
 530 535 540

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Lys Ala Ile Ser Ser Asp Arg Asp Pro Arg Gly Ser Leu Arg Phe Leu  
 545 550 555 560

Ile Ser Asp His Ala Arg Glu Ile Ile Ala Asp Gly Val Arg Phe Lys  
 565 570 575

Pro Val Ile Asp Glu Pro Val Arg Ala Ser Val Ala Leu Ser Thr Ala  
 580 585 590

Ala Ala Gly Lys Val Lys Ala Arg Arg Leu Thr Ser Val Arg Ala Pro  
 595 600 605

Val Pro Gly Ala Gly Ala Val Ser Ala Arg Arg Lys Ser Glu Ile  
 610 615 620

## (2) INFORMATION FOR SEQ ID NO:65:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 292 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: protein

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:

Met Ser Gly Phe Ser Asn Ile Gly Ser Ile Ala Thr Val Ser Leu Val  
 1 5 10 15

Cys Ser Leu Leu Cys Ala Ser Val Leu Gly Ala Pro Val Leu Asp Gly  
 20 25 30

Leu Glu Ser Ser Pro Phe Pro Phe Gly Gly Lys Ile Ile Ala Gln Ala  
 35 40 45

Cys Asn Arg Thr Thr Ile Glu Val Thr Val Pro Trp Ser Asp Tyr Ser  
 50 55 60

Gly Arg Thr Glu Gly Val Ser Val Glu Val Lys Trp Phe Tyr Gly Asn  
 65 70 75 80

Ser Asn Pro Glu Ser Phe Val Phe Gly Val Asp Ser Glu Thr Gly Ser  
 85 90 95

Gly His Glu Asp Leu Ser Thr Cys Trp Ala Leu Ile His Asn Leu Asn  
 100 105 110

Ala Ser Val Cys Arg Ala Ser Asp Ala Gly Ile Pro Asp Phe Asp Lys  
 115 120 125

Gln Cys Glu Lys Val Gln Arg Arg Leu Arg Ser Gly Val Glu Leu Gly  
 130 135 140

Ser Tyr Val Ser Gly Asn Gly Ser Leu Val Leu Tyr Pro Gly Met Tyr  
 145 150 155 160

Asp Ala Gly Ile Tyr Ala Tyr Gln Leu Ser Val Gly Gly Lys Gly Tyr  
 165 170 175

Thr Gly Ser Val Tyr Leu Asp Val Gly Pro Asn Pro Gly Cys His Asp  
 180 185 190

Gln Tyr Gly Tyr Thr Tyr Tyr Ser Leu Ala Asp Glu Ala Ser Asp Leu  
 195 200 205

Ser Ser Tyr Asp Val Ala Ser Pro Glu Leu Asp Gly Pro Met Glu Glu  
 210 215 220

Asp Tyr Ser Asn Cys Leu Asp Met Pro Pro Leu Arg Pro Trp Thr Thr  
 225 230 235 240

Val Cys Ser His Asp Val Glu Glu Gln Glu Asn Ala Thr Asp Glu Leu  
 245 250 255

Tyr Leu Trp Asp Glu Glu Cys Ala Gly Pro Leu Asp Glu Tyr Val Asp  
 260 265 270

Glu Arg Ser Glu Thr Met Pro Arg Met Val Val Phe Ser Pro Pro Ser

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275	280	285
Thr Leu Gln Gln		
290		
(2) INFORMATION FOR SEQ ID NO:66:		
(i) SEQUENCE CHARACTERISTICS:		
(A) LENGTH: 985 amino acids		
(B) TYPE: amino acid		
(D) TOPOLOGY: linear		
(ii) MOLECULE TYPE: protein		
(xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:		
Met Gly Thr Met Leu Val Leu Arg Leu Phe Leu Leu Ala Val Ala Asp		
1 5 10 15		
Ala Ala Leu Pro Thr Gly Arg Phe Cys Arg Val Trp Lys Val Pro Pro		
20 25 30		
Gly Gly Thr Ile Gln Glu Asn Leu Ala Val Leu Ala Glu Ser Pro Val		
35 40 45		
Thr Gly His Ala Thr Tyr Pro Pro Pro Glu Gly Ala Val Ser Phe Gln		
50 55 60		
Ile Phe Ala Asp Thr Pro Thr Leu Arg Ile Arg Tyr Gly Ala Thr Glu		
65 70 75 80		
Asp Glu Leu Ala Leu Glu Arg Gly Thr Ser Ala Ser Asp Ala Asp Asn		
85 90 95		
Val Thr Phe Ser Leu Ser Tyr Arg Pro Arg Pro Glu Ile His Gly Ala		
100 105 110		
Tyr Phe Thr Ile Gly Val Phe Ala Thr Gly Gln Ser Thr Glu Ser Ser		
115 120 125		
Tyr Ser Val Ile Ser Arg Val Leu Val Asn Ala Ser Leu Glu Arg Ser		
130 135 140		
Val Arg Leu Glu Thr Pro Cys Asp Glu Asn Phe Leu Gln Asn Glu Pro		
145 150 155 160		
Thr Trp Gly Ser Lys Arg Trp Leu Gly Pro Pro Ser Pro Tyr Val Arg		
165 170 175		
Asp Asn Asp Val Ala Val Leu Thr Lys Ala Gln Tyr Ile Gly Glu Cys		
180 185 190		
Tyr Ser Asn Ser Ala Ala Gln Thr Gly Leu Thr Ser Leu Asn Met Thr		
195 200 205		
Phe Phe Tyr Ser Pro Lys Arg Ile Val Asn Val Thr Trp Thr Thr Gly		
210 215 220		
Gly Pro Ser Pro Ser Arg Ile Thr Val Tyr Ser Ser Arg Glu Asn Gly		
225 230 235 240		
Gln Pro Val Leu Arg Asn Val Ser Asp Gly Phe Leu Val Lys Tyr Thr		
245 250 255		
Pro Asp Ile Asp Gly Arg Ala Met Ile Asn Val Ile Ala Asn Tyr Ser		
260 265 270		
Pro Ala Asp Ser Gly Ser Val Leu Ala Phe Thr Ala Phe Arg Glu Gly		
275 280 285		
Lys Leu Pro Ser Ala Ile Gln Leu His Arg Ile Asp Met Ser Gly Thr		
290 295 300		
Glu Pro Pro Gly Thr Glu Thr Thr Phe Asp Cys Gln Lys Met Ile Glu		
305 310 315 320		
Thr Pro Tyr Arg Ala Leu Gly Ser Asn Val Pro Arg Asp Asp Ser Ile		
325 330 335		

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Arg Pro Gly Ala Thr Leu Pro Pro Phe Asp Thr Ala Ala Pro Asp Phe  
 340 345 350  
 Asp Thr Gly Thr Ser Pro Thr Pro Thr Thr Val Pro Glu Pro Ala Ile  
 355 360 365  
 Thr Thr Leu Ile Pro Arg Ser Thr Ser Asp Met Gly Phe Phe Ser Thr  
 370 375 380  
 Ala Arg Ala Thr Gly Ser Glu Thr Leu Ser Val Pro Val Gln Glu Thr  
 385 390 395 400  
 Asp Arg Thr Leu Ser Thr Thr Pro Leu Thr Leu Pro Leu Thr Pro Gly  
 405 410 415  
 Glu Ser Glu Asn Thr Leu Phe Pro Thr Thr Ala Pro Gly Ile Ser Thr  
 420 425 430  
 Glu Thr Pro Ser Ala Ala His Glu Thr Thr Gln Thr Gln Ser Ala Glu  
 435 440 445  
 Thr Val Val Phe Thr Gln Ser Pro Ser Thr Glu Ser Glu Thr Ala Arg  
 450 455 460  
 Ser Gln Ser Gln Glu Pro Trp Tyr Phe Thr Gln Thr Pro Ser Thr Glu  
 465 470 475 480  
 Gln Ala Ala Leu Thr Gln Thr Gln Ile Ala Glu Thr Glu Ala Leu Phe  
 485 490 495  
 Thr Gln Thr Pro Ser Ala Glu Gln Met Thr Phe Thr Gln Thr Pro Gly  
 500 505 510  
 Ala Glu Thr Glu Ala Pro Ala Gln Thr Pro Ser Thr Ile Pro Glu Ile  
 515 520 525  
 Phe Thr Gln Ser Arg Ser Thr Pro Pro Glu Thr Ala Arg Ala Pro Ser  
 530 535 540  
 Ala Ala Pro Glu Val Phe Thr Gln Ser Ser Ser Thr Val Thr Glu Val  
 545 550 555 560  
 Phe Thr Gln Thr Pro Ser Thr Val Pro Lys Thr Thr Leu Ser Ser Ser  
 565 570 575  
 Thr Glu Pro Ala Ile Phe Thr Arg Thr Gln Ser Ala Gly Thr Glu Ala  
 580 585 590  
 Phe Thr Gln Thr Ser Ser Ala Glu Pro Asp Thr Met Arg Thr Gln Ser  
 595 600 605  
 Thr Glu Thr His Phe Phe Thr Gln Ala Pro Ser Thr Val Pro Lys Ala  
 610 615 620  
 Thr Gln Thr Pro Ser Thr Glu Pro Glu Val Leu Thr Gln Ser Pro Ser  
 625 630 635 640  
 Thr Glu Pro Val Pro Phe Thr Arg Thr Leu Gly Ala Glu Pro Glu Ile  
 645 650 655  
 Thr Gln Thr Pro Ser Ala Ala Pro Glu Val Tyr Thr Arg Ser Ser Ser  
 660 665 670  
 Thr Met Pro Glu Thr Ala Gln Ser Thr Pro Leu Ala Ser Gln Asn Pro  
 675 680 685  
 Thr Ser Ser Gly Thr Gly Thr His Asn Thr Glu Pro Arg Thr Tyr Pro  
 690 695 700  
 Val Gln Thr Thr Pro His Thr Gln Lys Leu Tyr Thr Glu Asn Lys Thr  
 705 710 715 720  
 Leu Ser Phe Pro Thr Val Val Ser Glu Phe His Glu Met Ser Thr Ala  
 725 730 735  
 Glu Ser Gln Thr Pro Leu Leu Asp Val Lys Ile Val Glu Val Lys Phe  
 740 745 750

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Ser Asn Asp Gly Glu Val Thr Ala Thr Cys Val Ser Thr Val Lys Ser
   755                               760                               765

Pro Tyr Arg Val Glu Thr Asn Trp Lys Val Asp Leu Val Asp Val Met
   770                               775                               780

Asp Glu Ile Ser Gly Asn Ser Pro Ala Gly Val Phe Asn Ser Asn Glu
   785                               790                               795                               800

Lys Trp Gln Lys Gln Leu Tyr Tyr Arg Val Thr Asp Gly Arg Thr Ser
   805                               810                               815

Val Gln Leu Met Cys Leu Ser Cys Thr Ser His Ser Pro Glu Pro Tyr
   820                               825                               830

Cys Leu Phe Asp Thr Ser Leu Ile Ala Arg Glu Lys Asp Ile Ala Pro
   835                               840                               845

Glu Leu Tyr Phe Thr Ser Asp Pro Gln Thr Ala Tyr Cys Thr Ile Thr
   850                               855                               860

Leu Pro Ser Gly Val Val Pro Arg Phe Glu Trp Ser Leu Asn Asn Val
   865                               870                               875                               880

Ser Leu Pro Glu Tyr Leu Thr Ala Thr Thr Val Val Ser His Thr Ala
   885                               890                               895

Gly Gln Ser Thr Val Trp Lys Ser Ser Ala Arg Ala Gly Glu Ala Trp
   900                               905                               910

Ile Ser Gly Arg Gly Gly Asn Ile Tyr Glu Cys Thr Val Leu Ile Ser
   915                               920                               925

Asp Gly Thr Arg Val Thr Thr Arg Lys Glu Arg Cys Leu Thr Asn Thr
   930                               935                               940

Trp Ile Ala Val Glu Asn Gly Ala Ala Gln Ala Gln Leu Tyr Ser Leu
   945                               950                               955                               960

Phe Ser Gly Leu Val Ser Gly Leu Cys Gly Ser Ile Ser Ala Leu Tyr
   965                               970                               975

Ala Thr Leu Trp Thr Ala Ile Tyr Phe
   980                               985

```

## (2) INFORMATION FOR SEQ ID NO:67:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 434 amino acids  
 (B) TYPE: amino acid  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:

```

Met His Arg Pro His Leu Arg Arg His Ser Arg Tyr Tyr Ala Lys Gly
  1           5           10           15

Glu Val Leu Asn Lys His Met Asp Cys Gly Gly Lys Arg Cys Cys Ser
  20           25           30

Gly Ala Ala Val Phe Thr Leu Phe Trp Thr Cys Val Arg Ile Met Arg
  35           40           45

Glu His Ile Cys Phe Val Arg Asn Ala Met Asp Arg His Leu Phe Leu
  50           55           60

Arg Asn Ala Phe Trp Thr Ile Val Leu Leu Ser Ser Phe Ala Ser Gln
  65           70           75           80

Ser Thr Ala Ala Val Thr Tyr Asp Tyr Ile Leu Gly Arg Arg Ala Leu
  85           90           95

Asp Ala Leu Thr Ile Pro Ala Val Gly Pro Tyr Asn Arg Tyr Leu Thr
  100          105          110

Arg Val Ser Arg Gly Cys Asp Val Val Glu Leu Asn Pro Ile Ser Asn

```

-continued

115	120	125
Val Asp Asp Met Ile Ser Ala Ala Lys Glu Lys Glu Lys Gly Gly Pro 130 135 140		
Phe Glu Ala Ser Val Val Trp Phe Tyr Val Ile Lys Gly Asp Asp Gly 145 150 155 160		
Glu Asp Lys Tyr Cys Pro Ile Tyr Arg Lys Glu Tyr Arg Glu Cys Gly 165 170 175		
Asp Val Gln Leu Leu Ser Glu Cys Ala Val Gln Ser Ala Gln Met Trp 180 185 190		
Ala Val Asp Tyr Val Pro Ser Thr Leu Val Ser Arg Asn Gly Ala Gly 195 200 205		
Leu Thr Ile Phe Ser Pro Thr Ala Ala Leu Ser Gly Gln Tyr Leu Leu 210 215 220		
Thr Leu Lys Ile Gly Arg Phe Ala Gln Thr Ala Leu Val Thr Leu Glu 225 230 235 240		
Val Asn Asp Arg Cys Leu Lys Ile Gly Ser Gln Leu Asn Phe Leu Pro 245 250 255		
Ser Lys Cys Trp Thr Thr Glu Gln Tyr Gln Thr Gly Phe Gln Gly Glu 260 265 270		
His Leu Tyr Pro Ile Ala Asp Thr Asn Thr Arg His Ala Asp Asp Val 275 280 285		
Tyr Arg Gly Tyr Glu Asp Ile Leu Gln Arg Trp Asn Asn Leu Leu Arg 290 295 300		
Lys Lys Asn Pro Ser Ala Pro Asp Pro Arg Pro Asp Ser Val Pro Gln 305 310 315 320		
Glu Ile Pro Ala Val Thr Lys Lys Ala Glu Gly Arg Thr Pro Asp Ala 325 330 335		
Glu Ser Ser Glu Lys Lys Ala Pro Pro Glu Asp Ser Glu Asp Asp Met 340 345 350		
Gln Ala Glu Ala Ser Gly Glu Asn Pro Ala Ala Leu Pro Glu Asp Asp 355 360 365		
Glu Val Pro Glu Asp Thr Glu His Asp Asp Pro Asn Ser Asp Pro Asp 370 375 380		
Tyr Tyr Asn Asp Met Pro Ala Val Ile Pro Val Glu Glu Thr Thr Lys 385 390 395 400		
Ser Ser Asn Ala Val Ser Met Pro Ile Phe Ala Ala Phe Val Ala Cys 405 410 415		
Ala Val Ala Leu Val Gly Leu Leu Val Trp Ser Ile Val Lys Cys Ala 420 425 430		

Arg Ser

(2) INFORMATION FOR SEQ ID NO:68:

- (i) SEQUENCE CHARACTERISTICS:
  - (A) LENGTH: 362 amino acids
  - (B) TYPE: amino acid
  - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:

Met Ala Ser Leu Leu Gly Thr Leu Ala Leu Leu Ala Ala Thr Leu Ala 1 5 10 15
Pro Phe Gly Ala Met Gly Ile Val Ile Thr Gly Asn His Val Ser Ala 20 25 30

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```

Arg Ile Asp Asp Asp His Ile Val Ile Val Ala Pro Arg Pro Glu Ala
   35                               40                               45
Thr Ile Gln Leu Gln Leu Phe Phe Met Pro Gly Gln Arg Pro His Lys
   50                               55                               60
Pro Tyr Ser Gly Thr Val Arg Val Ala Phe Arg Ser Asp Ile Thr Asn
   65                               70                               75                               80
Gln Cys Tyr Gln Glu Leu Ser Glu Glu Arg Phe Glu Asn Cys Thr His
                               85                               90                               95
Arg Ser Ser Ser Val Phe Val Gly Cys Lys Val Thr Glu Tyr Thr Phe
                               100                              105                              110
Ser Ala Ser Asn Arg Leu Thr Gly Pro Pro His Pro Phe Lys Leu Thr
   115                              120                              125
Ile Arg Asn Pro Arg Pro Asn Asp Ser Gly Met Phe Tyr Val Ile Val
   130                              135                              140
Arg Leu Asp Asp Thr Lys Glu Pro Ile Asp Val Phe Ala Ile Gln Leu
   145                              150                              155                              160
Ser Val Tyr Gln Phe Ala Asn Thr Ala Ala Thr Arg Gly Leu Tyr Ser
                               165                              170                              175
Lys Ala Ser Cys Arg Thr Phe Gly Leu Pro Thr Val Gln Leu Glu Ala
                               180                              185                              190
Tyr Leu Arg Thr Glu Glu Ser Trp Arg Asn Trp Gln Ala Tyr Val Ala
   195                              200                              205
Thr Glu Ala Thr Thr Thr Ser Ala Glu Ala Thr Thr Pro Thr Pro Val
   210                              215                              220
Thr Ala Thr Ser Ala Ser Glu Leu Glu Ala Glu His Phe Thr Phe Pro
   225                              230                              235                              240
Trp Leu Glu Asn Gly Val Asp His Tyr Glu Pro Thr Pro Ala Asn Glu
                               245                              250                              255
Asn Ser Asn Val Thr Val Arg Leu Gly Thr Met Ser Pro Thr Leu Ile
                               260                              265                              270
Gly Val Thr Val Ala Ala Val Val Ser Ala Thr Ile Gly Leu Val Ile
   275                              280                              285
Val Ile Ser Ile Val Thr Arg Asn Met Cys Thr Pro His Arg Lys Leu
   290                              295                              300
Asp Thr Val Ser Gln Asp Asp Glu Glu Arg Ser Gln Thr Arg Arg Glu
   305                              310                              315                              320
Ser Arg Lys Phe Gly Pro Met Val Ala Cys Glu Ile Asn Lys Gly Ala
                               325                              330                              335
Asp Gln Asp Ser Glu Leu Val Glu Leu Val Ala Ile Val Asn Pro Ser
   340                              345                              350
Ala Leu Ser Ser Pro Asp Ser Ile Lys Met
   355                              360

```

## (2) INFORMATION FOR SEQ ID NO:69:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 499 amino acids  
 (B) TYPE: amino acid  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:

```

Met Asn Met Leu Val Ile Val Leu Ala Ser Cys Leu Ala Arg Leu Thr
  1           5           10           15
Phe Ala Thr Arg His Val Leu Phe Leu Glu Gly Thr Gln Ala Val Leu

```



-continued

20					25					30					
Gly	Glu	Asp	Asp	Pro	Arg	Asn	Val	Pro	Glu	Gly	Thr	Val	Ile	Lys	Trp
	35						40					45			
Thr	Lys	Val	Leu	Arg	Asn	Ala	Cys	Lys	Met	Lys	Ala	Ala	Asp	Val	Cys
	50					55					60				
Ser	Ser	Pro	Asn	Tyr	Cys	Phe	His	Asp	Leu	Ile	Tyr	Asp	Gly	Gly	Lys
	65					70					75				80
Lys	Asp	Cys	Pro	Pro	Ala	Gly	Pro	Leu	Ser	Ala	Asn	Leu	Val	Ile	Leu
				85					90					95	
Leu	Lys	Arg	Gly	Glu	Ser	Phe	Val	Val	Leu	Gly	Ser	Gly	Leu	His	Asn
			100					105					110		
Ser	Asn	Ile	Thr	Asn	Ile	Met	Trp	Thr	Glu	Tyr	Gly	Gly	Leu	Leu	Phe
		115					120					125			
Asp	Pro	Val	Thr	Arg	Ser	Asp	Glu	Gly	Ile	Tyr	Phe	Arg	Arg	Ile	Ser
	130					135					140				
Gln	Pro	Asp	Leu	Ala	Met	Glu	Thr	Thr	Ser	Tyr	Asn	Val	Ser	Val	Leu
	145					150					155				160
Ser	His	Val	Asp	Glu	Lys	Ala	Pro	Ala	Pro	His	Glu	Val	Glu	Ile	Asp
			165						170					175	
Thr	Ile	Lys	Pro	Ser	Glu	Ala	His	Ala	His	Val	Glu	Leu	Gln	Met	Leu
			180					185					190		
Pro	Phe	His	Glu	Leu	Asn	Asp	Asn	Ser	Pro	Thr	Tyr	Val	Thr	Pro	Val
		195					200					205			
Leu	Arg	Val	Phe	Pro	Pro	Thr	Glu	His	Val	Lys	Phe	Asn	Val	Thr	Tyr
	210						215					220			
Ser	Trp	Tyr	Gly	Phe	Asp	Val	Lys	Glu	Glu	Cys	Glu	Glu	Val	Lys	Leu
	225					230					235				240
Phe	Glu	Pro	Cys	Val	Tyr	His	Pro	Thr	Asp	Gly	Lys	Cys	Gln	Phe	Pro
			245						250					255	
Ala	Thr	Asn	Gln	Arg	Cys	Leu	Ile	Gly	Ser	Val	Leu	Met	Ala	Glu	Phe
			260					265					270		
Leu	Gly	Ala	Ala	Ser	Leu	Leu	Asp	Cys	Ser	Arg	Asp	Thr	Leu	Glu	Asp
	275						280					285			
Cys	His	Glu	Asn	Arg	Val	Pro	Asn	Leu	Arg	Phe	Asp	Ser	Arg	Leu	Ser
	290					295					300				
Glu	Ser	Arg	Ala	Gly	Leu	Val	Ile	Ser	Pro	Leu	Ile	Ala	Ile	Pro	Lys
	305					310					315				320
Val	Leu	Ile	Ile	Val	Val	Ser	Asp	Gly	Asp	Ile	Leu	Gly	Trp	Ser	Tyr
			325						330					335	
Thr	Val	Leu	Gly	Lys	Arg	Asn	Ser	Pro	Arg	Val	Val	Val	Glu	Thr	His
			340					345					350		
Met	Pro	Ser	Lys	Val	Pro	Met	Asn	Lys	Val	Val	Ile	Gly	Ser	Pro	Gly
	355						360					365			
Pro	Met	Asp	Glu	Thr	Gly	Asn	Tyr	Lys	Met	Tyr	Phe	Val	Val	Ala	Gly
	370					375					380				
Val	Ala	Ala	Thr	Cys	Val	Ile	Leu	Thr	Cys	Ala	Leu	Leu	Val	Gly	Lys
	385					390					395				400
Lys	Lys	Cys	Pro	Ala	His	Gln	Met	Gly	Thr	Phe	Ser	Lys	Thr	Glu	Pro
			405						410					415	
Leu	Tyr	Ala	Pro	Leu	Pro	Lys	Asn	Glu	Phe	Glu	Ala	Gly	Gly	Leu	Thr
			420					425					430		
Asp	Asp	Glu	Glu	Val	Ile	Tyr	Asp	Glu	Val	Tyr	Glu	Pro	Leu	Phe	Arg
	435						440						445		

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Gly Tyr Cys Lys Gln Glu Phe Arg Glu Asp Val Asn Thr Phe Phe Gly  
 450 455 460  
 Ala Val Val Glu Gly Glu Arg Ala Leu Asn Phe Lys Ser Ala Ile Ala  
 465 470 475 480  
 Ser Met Ala Asp Arg Ile Leu Ala Asn Lys Ser Gly Arg Arg Asn Met  
 485 490 495  
 Asp Ser Tyr

## (2) INFORMATION FOR SEQ ID NO:70:

- (i) SEQUENCE CHARACTERISTICS:  
 (A) LENGTH: 260 amino acids  
 (B) TYPE: amino acid  
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:

Met Pro Phe Lys Thr Arg Gly Ala Glu Asp Ala Ala Ala Gly Lys Asn  
 1 5 10 15  
 Arg Phe Lys Lys Ser Arg Asn Arg Glu Ile Leu Pro Thr Arg Leu Arg  
 20 25 30  
 Gly Thr Gly Lys Lys Thr Ala Gly Leu Ser Asn Tyr Thr Gln Pro Ile  
 35 40 45  
 Pro Trp Asn Pro Lys Phe Cys Ser Ala Arg Gly Glu Ser Asp Asn His  
 50 55 60  
 Ala Cys Lys Asp Thr Phe Tyr Arg Arg Thr Cys Cys Ala Ser Arg Ser  
 65 70 75 80  
 Thr Val Ser Ser Gln Pro Asp Ser Pro His Thr Pro Met Pro Thr Glu  
 85 90 95  
 Tyr Gly Arg Val Pro Ser Ala Lys Arg Lys Lys Leu Ser Ser Ser Asp  
 100 105 110  
 Cys Glu Gly Ala His Gln Pro Leu Val Ser Cys Lys Leu Pro Asp Ser  
 115 120 125  
 Gln Ala Ala Pro Ala Arg Thr Tyr Ser Ser Ala Gln Arg Tyr Thr Val  
 130 135 140  
 Asp Glu Val Ser Ser Pro Thr Pro Pro Gly Val Asp Ala Val Ala Asp  
 145 150 155 160  
 Leu Glu Thr Arg Ala Glu Leu Pro Gly Ala Thr Thr Glu Gln Thr Glu  
 165 170 175  
 Ser Lys Asn Lys Leu Pro Asn Gln Gln Ser Arg Leu Lys Pro Lys Pro  
 180 185 190  
 Thr Asn Glu His Val Gly Gly Glu Arg Cys Pro Ser Glu Gly Thr Val  
 195 200 205  
 Glu Ala Pro Ser Leu Gly Ile Leu Ser Arg Val Gly Ala Ala Ile Ala  
 210 215 220  
 Asn Glu Leu Ala Arg Met Arg Arg Ala Cys Leu Pro Leu Ala Ala Ser  
 225 230 235 240  
 Ala Ala Ala Ala Gly Ile Val Ala Trp Ala Ala Ala Arg Ala Leu Gln  
 245 250 255  
 Lys Gln Gly Arg  
 260

## (2) INFORMATION FOR SEQ ID NO:71:

- (i) SEQUENCE CHARACTERISTICS:

-continued

(A) LENGTH: 294 amino acids  
(B) TYPE: amino acid  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:

```

Met Ser Lys Cys Tyr Cys Leu Ala Arg His Leu Tyr Lys Ser Pro Arg
 1             5             10             15
Cys Val Gly Arg Arg Val Ala Phe Gly Gly Leu Ala Thr Met Ser Arg
          20             25             30
Pro Pro Thr Ser His Leu Asp Leu Ala Phe Ser Ala Ala Phe Arg Gly
      35             40             45
Thr Asp Leu Pro Gly Gly Arg Phe Trp Arg Ala Ser Gln Ser Cys Asp
      50             55             60
Ile Phe Phe Trp Pro Asp Leu Ala Ala Val Ile Val Gln Ala Ala Arg
      65             70             75             80
Ala Tyr Phe Glu Gly Lys Glu Arg Leu Gly Ser Leu Gln Val Ala Glu
          85             90             95
Asp Ile Thr Ala His Asp Pro Arg Ile Ala Pro Ala Ala Lys Arg Ala
      100             105             110
Val Ala Ala Ala Val Gly Leu Trp Thr Ala Leu Ser Glu Leu Val Gly
      115             120             125
Gly Pro Asn Gly Glu Leu Glu Ser Lys Val Trp Gly Lys Gln Ile Pro
      130             135             140
Arg Ala Ala Ala Trp Glu Ile Arg Asp Val Pro Lys Val Pro Val Ile
      145             150             155             160
Gly Pro Asp Ile Leu Ser Phe Phe Ser Ala Ala Val Glu Leu Pro Val
          165             170             175
Leu Tyr Ile Arg Ala Arg Gly Gly Ala His Ser Arg Ser Ala His Trp
      180             185             190
Asn Asn Gln Ser Ser Ala Pro Ala Ala Gly Leu Ala Ala Ile Arg Ile
      195             200             205
Gly Met Glu Met Val Arg Ser Leu Leu Val Ile Ala Leu Pro Leu Ser
      210             215             220
Asn Phe Thr Leu Pro Glu Asp Leu Pro Glu Gly Ser Gln Asn Ser Ile
      225             230             235             240
Arg Ala Phe Val Ala His Leu Met Asn Cys Val Ala Thr Asp Lys Ile
          245             250             255
Met Ser Pro Asp Val Arg Val Pro Val Glu Glu Ser Phe Tyr Ser His
          260             265             270
Cys Leu Arg Glu Ile Ile Met Cys Glu Arg Ala Phe Cys Tyr Pro Cys
      275             280             285
Asn Pro Pro Pro Lys Trp
      290

```

(2) INFORMATION FOR SEQ ID NO:72:

(i) SEQUENCE CHARACTERISTICS:  
(A) LENGTH: 278 amino acids  
(B) TYPE: amino acid  
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

```

Met Glu Asn Met Leu Asp Gly Cys Tyr Pro Leu Ala Leu Met Asp Ser
 1             5             10             15

```

-continued

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```

Asp His Ile Thr Ala His Ala Val Pro Arg Gly Glu Arg Arg Arg Gln
      20                      25                      30
Gly Ala Ala Val Ala Ser Ser Glu Ser Ala Asp Ser Val Asp Pro Cys
      35                      40                      45
Ile Arg Ile Ala Ser Arg Leu Trp Arg Glu Leu Val Glu Ile Ser Ser
      50                      55                      60
Glu Leu Lys Asp Gly Tyr Gly Glu Phe Thr Ser Ala Arg Asp Arg Arg
      65                      70                      75                      80
Asn Ala Leu Ile Ala Ala Asn Glu Arg Leu Arg Ser Ala Phe Leu Gly
      85                      90                      95
Ala Ser Arg Ala Thr Arg Gly Leu Gly Leu Arg Pro Arg Trp Ala Ser
      100                     105                     110
Thr Glu Ser Val Ala Asn Ser Pro Thr Asp Pro Asn Asn Gly Asn Gly
      115                     120                     125
Leu Gly Glu Leu Glu Glu Ala Met Glu Gly Ile Glu Gly Asp Phe Trp
      130                     135                     140
Leu Asp Ser Leu Asp Gly Asp Arg Phe Glu Asp Glu Ser Arg Thr Met
      145                     150                     155                     160
Gln Ser Glu Asn Met Arg Phe Val Ile Glu Lys Glu Leu Leu Ser Trp
      165                     170                     175
Leu Ser Arg His Leu Pro Ala Asp Leu Ala Ser Ala Glu Arg Glu Thr
      180                     185                     190
Ser Arg Ser Leu Leu Ala Ala Gly His Trp Cys Cys Leu Trp His Pro
      195                     200                     205
Arg Pro Cys Arg Glu Ala Cys Leu Tyr Asp Ser Ile Tyr Val Gln Ser
      210                     215                     220
Leu Phe Cys Val Gly Thr Gly Arg Val Pro Gln Ser Glu Met Arg Arg
      225                     230                     235                     240
Arg Glu Tyr Leu Ala Ala Leu Arg Ala Gly Ala Ala Ala Ala Asn Ser
      245                     250                     255
Pro Glu Val Ser Ala Ser Ile Phe Ala Arg Asp Ala Gly Ile Ala Leu
      260                     265                     270
Ala Leu Ala Arg Arg Arg
      275

```

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+D2 +HZ,1/64

!+TL,1 ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 SEQUENCE+10 LISTING ?

!+0

!+0

!(1)+10 GENERAL+10 INFORMATION: ?

!+0

!+10 +10 +10 (iii)+10 NUMBER+10 OF+10 SEQUENCES:+10 72 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:1: ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

73

PM

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 13473+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 1059..2489 ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 2575..4107 ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 4113..4445 ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 4609..5487 ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 5697..8654 ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 9874..10962 ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

74

PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 11159..12658 ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 12665..13447 ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:1: ?

!+0

!CCCGTGTCCCC+10 TAAAGGCCGC+10 CGAGAAAGCT+10 AAGTCCAAAT+10 GTGACGTCGG+10 AG

#GTCTCGAC+10 +10 +10 +10 +10 60 ?

!+0

!ATGGTCGCCA+10 ACCCTCCAAA+10 TGCTACCCGC+10 CGGCCACGC+10 AACGCGGGCT+10 TT

#TATAAAGA+10 +10 +10 +10 120 ?

!+0

!TGGCGCGCGA+10 GACAATAACA+10 CTTACTCATC+10 CGCGTACGCG+10 TTTATTATTG+10 TC

#AATATTTG+10 +10 +10 +10 180 ?

!+0

!TGTGGTTATT+10 ATTACTGCTA+10 CCGCCCTTGT+10 TTCTGCAAGG+10 CCCTCGCCGC+10 GG

#CCCAGGCC+10 +10 +10 +10 240 ?

!+0

!ACTATTCCGG+10 CAGCGGCCGC+10 CGACCGGGCG+10 AGCGTCGCCG+10 CTAACGTCGG+10 CG

#CCGCGGGG+10 +10 +10 +10 300 ?

!+0

!AGCGGGGTTT+10 CTTCGACTTA+10 AATAGACTCC+10 CGAGAAAAA+10 TTTTGGCTGC+10 CG

#TTCGCCAT+10 +10 +10 +10 360 ?

!+0

!CATCCGAGTC+10 GGAAACACAG+10 TATGCGGCCG+10 AGTTAGGTTT+10 TACTTTTAAA+10 AA

#CTTTACCG+10 +10 +10 +10 420 ?

!+0

!TGCTGTACGG+10 CCAGGGCGTT+10 CTCAGGCTCG+10 AAGGGCAAG+10 AGTTGTCCAG+10 AC

#TGATGGGT+10 +10 +10 +10 480 ?

!+0

!GACTCAGAGA+10 CAGCGTTGTC+10 TTGTCTCCGT+10 TTACCAAAAA+10 TATTTCCACT+10 CC

#TCTCTCAA+10 +10 +10 +10 540 ?

!+0

!AATTTTACC+10 TCCGGTTTCG+10 GTAATTAGGA+10 AAGTTTTTGG+10 CGCAGGGAGG+10 TT

#TAAAGCTG+10 +10 +10 +10 600 ?

!+0



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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20 ?

!+0

!CCG+10 CTT+10 ACC+10 TCA+10 AAA+10 CGC+10 GTT+10 TGC+10 GTA+10 TTG+10 GA

#T+10 AGT+10 TTC+10 TCA+10 CGG+10 ACA+10 +10 +10 +10 +10 1169 ?

!Pro+10 Leu+10 Thr+10 Ser+10 Lys+10 Arg+10 Val+10 Cys+10 Val+10 Leu+10 As

#p+10 Ser+10 Phe+10 Ser+10 Arg+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 35 ?

!+0

!ATG+10 TCA+10 TTG+10 CGC+10 CCC+10 TAT+10 GCA+10 GAA+10 ATT+10 TTG+10 CC

#G+10 ACC+10 GCG+10 GAA+10 GGC+10 GTC+10 +10 +10 +10 +10 1217 ?

!Met+10 Ser+10 Leu+10 Arg+10 Pro+10 Tyr+10 Ala+10 Glu+10 Ile+10 Leu+10 Pr

#o+10 Thr+10 Ala+10 Glu+10 Gly+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 45+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 50 ?

!+0

!GAG+10 CGC+10 CTC+10 GCC+10 GAA+10 CTT+10 GTT+10 AGT+10 GTG+10 ACA+10 AT

#G+10 ACA+10 GAA+10 CGC+10 GCG+10 GAA+10 +10 +10 +10 +10 1265 ?

!Glu+10 Arg+10 Leu+10 Ala+10 Glu+10 Leu+10 Val+10 Ser+10 Val+10 Thr+10 Me

#t+10 Thr+10 Glu+10 Arg+10 Ala+10 Glu ?

!+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 65 ?

!+0

!CCT+10 GTG+10 ACA+10 GAG+10 AAT+10 ACA+10 GCT+10 GTA+10 AAC+10 AGT+10 AT

#C+10 CCC+10 CCG+10 GCT+10 AAC+10 GAG+10 +10 +10 +10 +10 1313 ?

!Pro+10 Val+10 Thr+10 Glu+10 Asn+10 Thr+10 Ala+10 Val+10 Asn+10 Ser+10 Il

#e+10 Pro+10 Pro+10 Ala+10 Asn+10 Glu ?

!+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 85 ?

!+0

!AAC+10 GGG+10 CAG+10 AAC+10 TTC+10 GCA+10 TAT+10 GCA+10 GGC+10 GAT+10 GG

#G+10 CCC+10 TCG+10 ACT+10 ACT+10 GAA+10 +10 +10 +10 +10 1361 ?

!Asn+10 Gly+10 Gln+10 Asn+10 Phe+10 Ala+10 Tyr+10 Ala+10 Gly+10 Asp+10 Gl



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PM

#y+10 Pro+10 Ser+10 Thr+10 Thr+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100 ?

!+0

!AAA+10 GTT+10 GAC+10 GGC+10 TCG+10 CAT+10 ACA+10 GAC+10 TTC+10 GAT+10 GA

#A+10 GCA+10 TCG+10 AGC+10 GAC+10 TAC+10 +10 +10 +10 +10 1409 ?

!Lys+10 Val+10 Asp+10 Gly+10 Ser+10 His+10 Thr+10 Asp+10 Phe+10 Asp+10 Gl

#u+10 Ala+10 Ser+10 Ser+10 Asp+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 115 ?

!+0

!GCC+10 GGC+10 CCT+10 GTC+10 CCG+10 CTC+10 GCG+10 CAA+10 ACT+10 AGA+10 TT

#G+10 AAG+10 CAT+10 TCG+10 GAT+10 GAA+10 +10 +10 +10 +10 1457 ?

!Ala+10 Gly+10 Pro+10 Val+10 Pro+10 Leu+10 Ala+10 Gln+10 Thr+10 Arg+10 Le

#u+10 Lys+10 His+10 Ser+10 Asp+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 130 ?

!+0

!TTT+10 CTT+10 CAG+10 CAC+10 TTC+10 CGA+10 GTT+10 TTA+10 GAC+10 GAT+10 TT

#G+10 GTG+10 GAG+10 GGG+10 GCT+10 TAC+10 +10 +10 +10 +10 1505 ?

!Phe+10 Leu+10 Gln+10 His+10 Phe+10 Arg+10 Val+10 Leu+10 Asp+10 Asp+10 Le

#u+10 Val+10 Glu+10 Gly+10 Ala+10 Tyr ?

!+10 +10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 145 ?

!+0

!GGG+10 TTT+10 ATC+10 TGC+10 GGC+10 GTC+10 CGT+10 CGC+10 TAC+10 ACC+10 GA

#G+10 GAA+10 GAG+10 CAA+10 CGT+10 CGA+10 +10 +10 +10 +10 1553 ?

!Gly+10 Phe+10 Ile+10 Cys+10 Gly+10 Val+10 Arg+10 Arg+10 Tyr+10 Thr+10 Gl

#u+10 Glu+10 Glu+10 Gln+10 Arg+10 Arg ?

!150+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#65 ?

!+0

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PM

!AGA+10 GGG+10 GTT+10 AAC+10 AGT+10 ACT+10 AAC+10 CAG+10 GGG+10 AAA+10 TC  
#A+10 AAA+10 TGT+10 AAG+10 CGC+10 CTG+10 +10 +10 +10 +10 1601 ?  
!Arg+10 Gly+10 Val+10 Asn+10 Ser+10 Thr+10 Asn+10 Gln+10 Gly+10 Lys+10 Se  
#r+10 Lys+10 Cys+10 Lys+10 Arg+10 Leu ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180 ?  
!+0  
!ATA+10 GCT+10 AAA+10 TAT+10 GTG+10 AAA+10 AAT+10 GGA+10 ACA+10 AGG+10 GC  
#G+10 GCC+10 TCT+10 CAG+10 CTG+10 GAA+10 +10 +10 +10 +10 1649 ?  
!Ile+10 Ala+10 Lys+10 Tyr+10 Val+10 Lys+10 Asn+10 Gly+10 Thr+10 Arg+10 Al  
#a+10 Ala+10 Ser+10 Gln+10 Leu+10 Glu ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 195 ?  
!+0  
!AAT+10 GAA+10 ATT+10 TTG+10 GTT+10 CTC+10 GGG+10 CGC+10 CTA+10 AAT+10 CA  
#C+10 GAG+10 AAT+10 GTT+10 CTC+10 AAG+10 +10 +10 +10 +10 1697 ?  
!Asn+10 Glu+10 Ile+10 Leu+10 Val+10 Leu+10 Gly+10 Arg+10 Leu+10 Asn+10 Hi  
#s+10 Glu+10 Asn+10 Val+10 Leu+10 Lys ?  
!+10 +10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 205+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 210 ?  
!+0  
!ATC+10 CAG+10 GAA+10 ATC+10 CTT+10 CGG+10 TAC+10 CCG+10 GAT+10 AAT+10 AC  
#G+10 TAC+10 ATG+10 TTA+10 ACG+10 CAG+10 +10 +10 +10 +10 1745 ?  
!Ile+10 Gln+10 Glu+10 Ile+10 Leu+10 Arg+10 Tyr+10 Pro+10 Asp+10 Asn+10 Th  
#r+10 Tyr+10 Met+10 Leu+10 Thr+10 Gln ?  
!+10 +10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 220+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 225 ?  
!+0  
!AGG+10 TAT+10 CAG+10 TTC+10 GAC+10 TTG+10 TAC+10 AGC+10 TAC+10 ATG+10 TA  
#C+10 GAT+10 GAA+10 GCG+10 TTC+10 GAC+10 +10 +10 +10 +10 1793 ?  
!Arg+10 Tyr+10 Gln+10 Phe+10 Asp+10 Leu+10 Tyr+10 Ser+10 Tyr+10 Met+10 Ty  
#r+10 Asp+10 Glu+10 Ala+10 Phe+10 Asp ?  
!230+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

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PM

#40+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#45 ?

!+0

!TGG+10 AAA+10 GAC+10 AGT+10 CCA+10 ATG+10 CTT+10 AAA+10 CAG+10 ACT+10 AG

#A+10 CGC+10 ATC+10 ATG+10 AAG+10 CAG+10 +10 +10 +10 +10 1841 ?

!Trp+10 Lys+10 Asp+10 Ser+10 Pro+10 Met+10 Leu+10 Lys+10 Gln+10 Thr+10 Ar

#g+10 Arg+10 Ile+10 Met+10 Lys+10 Gln ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260 ?

!+0

!CTC+10 ATG+10 TCA+10 GCG+10 GTC+10 TCG+10 TAT+10 ATC+10 CAT+10 TCA+10 AA

#G+10 AAA+10 CTG+10 ATT+10 CAC+10 AGG+10 +10 +10 +10 +10 1889 ?

!Leu+10 Met+10 Ser+10 Ala+10 Val+10 Ser+10 Tyr+10 Ile+10 His+10 Ser+10 Ly

#s+10 Lys+10 Leu+10 Ile+10 His+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 275 ?

!+0

!GAC+10 ATC+10 AAA+10 CTC+10 GAA+10 AAT+10 ATT+10 TTC+10 TTA+10 AAC+10 TG

#C+10 GAC+10 GGC+10 AAG+10 ACA+10 GTG+10 +10 +10 +10 +10 1937 ?

!Asp+10 Ile+10 Lys+10 Leu+10 Glu+10 Asn+10 Ile+10 Phe+10 Leu+10 Asn+10 Cy

#s+10 Asp+10 Gly+10 Lys+10 Thr+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 285+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 290 ?

!+0

!CTG+10 GGC+10 GAC+10 TTT+10 GGA+10 ACT+10 GTC+10 ACG+10 CCT+10 TTT+10 GA

#A+10 AAT+10 GAG+10 CGG+10 GAG+10 CCC+10 +10 +10 +10 +10 1985 ?

!Leu+10 Gly+10 Asp+10 Phe+10 Gly+10 Thr+10 Val+10 Thr+10 Pro+10 Phe+10 Gl

#u+10 Asn+10 Glu+10 Arg+10 Glu+10 Pro ?

!+10 +10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 300+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 305 ?

!+0

!TTC+10 GAA+10 TAT+10 GGA+10 TGG+10 GTG+10 GGG+10 ACC+10 GTG+10 GCT+10 AC

#T+10 AAC+10 TCT+10 CCC+10 GAG+10 ATA+10 +10 +10 +10 +10 2033 ?

!Phe+10 Glu+10 Tyr+10 Gly+10 Trp+10 Val+10 Gly+10 Thr+10 Val+10 Ala+10 Th

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PM

#r+10 Asn+10 Ser+10 Pro+10 Glu+10 Ile ?

!310+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#20+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#25 ?

!+0

!CTC+10 GCC+10 AGG+10 GAT+10 TCG+10 TAC+10 TGT+10 GAA+10 ATT+10 ACA+10 GA

#C+10 ATT+10 TGG+10 AGC+10 TGC+10 GGA+10 +10 +10 +10 +10 2081 ?

!Leu+10 Ala+10 Arg+10 Asp+10 Ser+10 Tyr+10 Cys+10 Glu+10 Ile+10 Thr+10 As

#p+10 Ile+10 Trp+10 Ser+10 Cys+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340 ?

!+0

!GTA+10 GTA+10 TTG+10 CTG+10 GAA+10 ATG+10 GTA+10 AGC+10 CAT+10 GAA+10 TT

#T+10 TGC+10 CCG+10 ATC+10 GGC+10 GAT+10 +10 +10 +10 +10 2129 ?

!Val+10 Val+10 Leu+10 Leu+10 Glu+10 Met+10 Val+10 Ser+10 His+10 Glu+10 Ph

#e+10 Cys+10 Pro+10 Ile+10 Gly+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 355 ?

!+0

!GGC+10 GGG+10 GGA+10 AAT+10 CCG+10 CAC+10 CAG+10 CAA+10 TTG+10 CTG+10 AA

#A+10 GTT+10 ATC+10 GAC+10 TCT+10 CTC+10 +10 +10 +10 +10 2177 ?

!Gly+10 Gly+10 Gly+10 Asn+10 Pro+10 His+10 Gln+10 Gln+10 Leu+10 Leu+10 Ly

#s+10 Val+10 Ile+10 Asp+10 Ser+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 365+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 370 ?

!+0

!TCA+10 GTT+10 TGT+10 GAT+10 GAA+10 GAG+10 TTC+10 CCA+10 GAC+10 CCC+10 CC

#G+10 TGT+10 AAT+10 CTG+10 TAC+10 AAT+10 +10 +10 +10 +10 2225 ?

!Ser+10 Val+10 Cys+10 Asp+10 Glu+10 Glu+10 Phe+10 Pro+10 Asp+10 Pro+10 Pr

#o+10 Cys+10 Asn+10 Leu+10 Tyr+10 Asn ?

!+10 +10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 380+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 385 ?

!+0

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PM

!TAT+10 TTG+10 CAT+10 TAT+10 GCG+10 AGC+10 ATC+10 GAT+10 CGC+10 GCC+10 GG

#A+10 CAT+10 ACG+10 GTC+10 CCG+10 TCG+10 +10 +10 +10 +10 2273 ?

!Tyr+10 Leu+10 His+10 Tyr+10 Ala+10 Ser+10 Ile+10 Asp+10 Arg+10 Ala+10 Gl

#y+10 His+10 Thr+10 Val+10 Pro+10 Ser ?

!390+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#00+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#05 ?

!+0

!CTC+10 ATA+10 CGG+10 AAC+10 CTC+10 CAC+10 CTT+10 CCG+10 GCG+10 GAT+10 GT

#G+10 GAA+10 TAC+10 CCT+10 CTA+10 GTT+10 +10 +10 +10 +10 2321 ?

!Leu+10 Ile+10 Arg+10 Asn+10 Leu+10 His+10 Leu+10 Pro+10 Ala+10 Asp+10 Va

#l+10 Glu+10 Tyr+10 Pro+10 Leu+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420 ?

!+0

!AAA+10 ATG+10 CTT+10 ACT+10 TTT+10 GAC+10 TGG+10 CGT+10 TTG+10 AGA+10 CC

#C+10 AGC+10 GCG+10 GCC+10 GAA+10 GTA+10 +10 +10 +10 +10 2369 ?

!Lys+10 Met+10 Leu+10 Thr+10 Phe+10 Asp+10 Trp+10 Arg+10 Leu+10 Arg+10 Pr

#o+10 Ser+10 Ala+10 Ala+10 Glu+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 435 ?

!+0

!TTG+10 GCA+10 ATG+10 CCA+10 CTG+10 TTT+10 TCG+10 GCT+10 GAA+10 GAG+10 GA

#A+10 CGG+10 ACC+10 ATA+10 ACA+10 ATT+10 +10 +10 +10 +10 2417 ?

!Leu+10 Ala+10 Met+10 Pro+10 Leu+10 Phe+10 Ser+10 Ala+10 Glu+10 Glu+10 Gl

#u+10 Arg+10 Thr+10 Ile+10 Thr+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 440+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 445+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 450 ?

!+0

!ATT+10 CAT+10 GGA+10 AAA+10 CAT+10 AAA+10 CCC+10 ATC+10 CGA+10 CCC+10 GA

#A+10 ATC+10 CGT+10 GCG+10 CCG+10 GTG+10 +10 +10 +10 +10 2465 ?

!Ile+10 His+10 Gly+10 Lys+10 His+10 Lys+10 Pro+10 Ile+10 Arg+10 Pro+10 Gl

#u+10 Ile+10 Arg+10 Ala+10 Arg+10 Val ?

!+10 +10 +10 +10 455+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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PM

#+10 +10 +10 460+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 465 ?

!+0

!CCA+10 CGG+10 TCC+10 ATG+10 AGT+10 GAA+10 GGT+10 TAATAATAAAA+10 GGACGGAGA

#T+10 AGAGAACTGA+10 +10 +10 +10 +10 +10 +10 +10 2516 ?

!Pro+10 Arg+10 Ser+10 Met+10 Ser+10 Glu+10 Gly ?

!470+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#75 ?

!+0

!AGCGTCAGAT+10 TTTTTTAAAA+10 AAATAAATGA+10 TCGAGAACTT+10 ATGATTTGTC+10 TT

#TCTTGA+10 +10 +10 +10 +10 2574 ?

!+0

!ATG+10 ACC+10 TTG+10 CCC+10 CAT+10 CGA+10 TTA+10 ACG+10 AAA+10 AGA+10 CC

#T+10 TTC+10 GCG+10 CGT+10 CGA+10 TTC+10 +10 +10 +10 +10 2622 ?

!Met+10 Thr+10 Leu+10 Pro+10 His+10 Arg+10 Leu+10 Thr+10 Lys+10 Arg+10 Pr

#o+10 Phe+10 Ala+10 Arg+10 Arg+10 Phe ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!TGC+10 TCG+10 GTC+10 TTT+10 GTG+10 ATA+10 CAT+10 TAT+10 AGT+10 GAG+10 AC

#T+10 AAA+10 CTC+10 GAC+10 CGA+10 TAT+10 +10 +10 +10 +10 2670 ?

!Cys+10 Ser+10 Val+10 Phe+10 Val+10 Ile+10 His+10 Tyr+10 Ser+10 Glu+10 Th

#r+10 Lys+10 Leu+10 Asp+10 Arg+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!AAC+10 AAG+10 ACA+10 ATG+10 TTA+10 CTC+10 TAT+10 AGA+10 CCG+10 GAC+10 TC

#A+10 ACC+10 ATG+10 CGG+10 CAT+10 AGC+10 +10 +10 +10 +10 2718 ?

!Asn+10 Lys+10 Thr+10 Met+10 Leu+10 Leu+10 Tyr+10 Arg+10 Pro+10 Asp+10 Se

#r+10 Thr+10 Met+10 Arg+10 His+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!GGA+10 GGC+10 GAC+10 GCA+10 AAT+10 CAC+10 AGA+10 GGG+10 ATA+10 AGG+10 CC

#G+10 AGG+10 CGG+10 AAA+10 TCT+10 ATT+10 +10 +10 +10 +10 2766 ?



!+0

!GAT+10 GCG+10 GAG+10 GAG+10 GAG+10 AGA+10 GTG+10 ACT+10 TAT+10 GAG+10 TC

#C+10 AAA+10 CCG+10 ACC+10 CCG+10 ATA+10 +10 +10 +10 +10 3006 ?

!Asp+10 Ala+10 Glu+10 Glu+10 Glu+10 Arg+10 Val+10 Thr+10 Tyr+10 Glu+10 Se

#r+10 Lys+10 Pro+10 Thr+10 Pro+10 Ile ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!CAG+10 CCG+10 TTC+10 AAT+10 GCC+10 TGG+10 CCG+10 GAC+10 GGG+10 CCG+10 AG

#T+10 TGG+10 AAC+10 GCG+10 CAG+10 GAT+10 +10 +10 +10 +10 3054 ?

!Gln+10 Pro+10 Phe+10 Asn+10 Ala+10 Trp+10 Pro+10 Asp+10 Gly+10 Pro+10 Se

#r+10 Trp+10 Asn+10 Ala+10 Gln+10 Asp ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!TTT+10 ACT+10 CGA+10 GCG+10 CCA+10 ATA+10 GTT+10 TAT+10 CCC+10 TCT+10 GC

#G+10 GAG+10 GTA+10 TTG+10 GAC+10 GCA+10 +10 +10 +10 +10 3102 ?

!Phe+10 Thr+10 Arg+10 Ala+10 Pro+10 Ile+10 Val+10 Tyr+10 Pro+10 Ser+10 Al

#a+10 Glu+10 Val+10 Leu+10 Asp+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!GAG+10 GCG+10 TTG+10 AAA+10 GTA+10 GGG+10 GCA+10 TTC+10 GTT+10 AGC+10 CG

#A+10 GTT+10 TTA+10 CAA+10 TGT+10 GTA+10 +10 +10 +10 +10 3150 ?

!Glu+10 Ala+10 Leu+10 Lys+10 Val+10 Gly+10 Ala+10 Phe+10 Val+10 Ser+10 Ar

#g+10 Val+10 Leu+10 Gln+10 Cys+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!CCG+10 TTC+10 ACG+10 CGA+10 TCA+10 AAG+10 AAA+10 AGC+10 GTT+10 ACG+10 GT

#G+10 CGG+10 GAT+10 GCG+10 CAG+10 TCG+10 +10 +10 +10 +10 3198 ?

!Pro+10 Phe+10 Thr+10 Arg+10 Ser+10 Lys+10 Lys+10 Ser+10 Val+10 Thr+10 Va

#l+10 Arg+10 Asp+10 Ala+10 Gln+10 Ser ?



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85

PM

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!TTT+10 TTG+10 GGG+10 GAC+10 TCG+10 TTC+10 TGG+10 AGA+10 ATA+10 ATG+10 CA

#G+10 AAC+10 GTT+10 TAC+10 ACG+10 GTT+10 +10 +10 +10 +10 3246 ?

!Phe+10 Leu+10 Gly+10 Asp+10 Ser+10 Phe+10 Trp+10 Arg+10 Ile+10 Met+10 Gl

#n+10 Asn+10 Val+10 Tyr+10 Thr+10 Val ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!TGC+10 TTA+10 CGA+10 CAG+10 CAC+10 ATA+10 ACT+10 CGA+10 CTC+10 AGG+10 CA

#C+10 CCT+10 TCC+10 AGC+10 AAA+10 AGC+10 +10 +10 +10 +10 3294 ?

!Cys+10 Leu+10 Arg+10 Gln+10 His+10 Ile+10 Thr+10 Arg+10 Leu+10 Arg+10 Hi

#s+10 Pro+10 Ser+10 Ser+10 Lys+10 Ser ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!ATT+10 GTT+10 AAC+10 TGC+10 AAC+10 GAC+10 CCT+10 CTA+10 TGG+10 TAC+10 GC

#C+10 TAC+10 GCG+10 AAT+10 CAA+10 TTT+10 +10 +10 +10 +10 3342 ?

!Ile+10 Val+10 Asn+10 Cys+10 Asn+10 Asp+10 Pro+10 Leu+10 Trp+10 Tyr+10 Al

#a+10 Tyr+10 Ala+10 Asn+10 Gln+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!CAC+10 TGG+10 AGA+10 GGA+10 ATG+10 CGC+10 GTG+10 CCG+10 TCG+10 CTT+10 AA

#A+10 TTA+10 GCC+10 TCT+10 CCC+10 CCG+10 +10 +10 +10 +10 3390 ?

!His+10 Trp+10 Arg+10 Gly+10 Met+10 Arg+10 Val+10 Pro+10 Ser+10 Leu+10 Ly

#s+10 Leu+10 Ala+10 Ser+10 Pro+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!GAG+10 GAG+10 AAT+10 ATT+10 CAA+10 CAC+10 GGC+10 CCA+10 ATG+10 GCC+10 GC

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86

PM

#C+10 GTT+10 TTT+10 AGA+10 AAC+10 GCG+10 +10 +10 +10 +10 3438 ?

!Glu+10 Glu+10 Asn+10 Ile+10 Gln+10 His+10 Gly+10 Pro+10 Met+10 Ala+10 Al

#a+10 Val+10 Phe+10 Arg+10 Asn+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!GGG+10 GCT+10 GGT+10 CTG+10 TTC+10 CTG+10 TGG+10 CCT+10 GCC+10 ATG+10 CG

#C+10 GCA+10 GCC+10 TTT+10 GAA+10 GAG+10 +10 +10 +10 +10 3486 ?

!Gly+10 Ala+10 Gly+10 Leu+10 Phe+10 Leu+10 Trp+10 Pro+10 Ala+10 Met+10 Ar

#g+10 Ala+10 Ala+10 Phe+10 Glu+10 Glu ?

!+10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 300 ?

!+0

!CGC+10 GAC+10 AAG+10 CGA+10 CTG+10 TTA+10 AGA+10 GCA+10 TGC+10 CTG+10 TC

#T+10 TCA+10 CTC+10 GAT+10 ATC+10 ATG+10 +10 +10 +10 +10 3534 ?

!Arg+10 Asp+10 Lys+10 Arg+10 Leu+10 Leu+10 Arg+10 Ala+10 Cys+10 Leu+10 Se

#r+10 Ser+10 Leu+10 Asp+10 Ile+10 Met ?

!305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#20 ?

!+0

!GAC+10 GCA+10 GCC+10 GTC+10 CTC+10 GCG+10 TCG+10 TTT+10 CCA+10 TTT+10 TA

#C+10 TGG+10 CGC+10 GGC+10 GTC+10 CAA+10 +10 +10 +10 +10 3582 ?

!Asp+10 Ala+10 Ala+10 Val+10 Leu+10 Ala+10 Ser+10 Phe+10 Pro+10 Phe+10 Ty

#r+10 Trp+10 Arg+10 Gly+10 Val+10 Gln ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335 ?

!+0

!GAC+10 ACC+10 TCG+10 CGC+10 TTC+10 GAG+10 CCT+10 GCG+10 CTG+10 GGC+10 TG

#T+10 TTG+10 TCA+10 GAG+10 TAC+10 TTT+10 +10 +10 +10 +10 3630 ?

!Asp+10 Thr+10 Ser+10 Arg+10 Phe+10 Glu+10 Pro+10 Ala+10 Leu+10 Gly+10 Cy

#s+10 Leu+10 Ser+10 Glu+10 Tyr+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10 +10

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87

PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?

!+0

!GCA+10 CTA+10 GTG+10 GTG+10 TTA+10 CTG+10 GCC+10 GAG+10 ACG+10 GTC+10 TT

#A+10 GCG+10 ACC+10 ATG+10 TTC+10 GAC+10 +10 +10 +10 +10 3678 ?

!Ala+10 Leu+10 Val+10 Val+10 Leu+10 Leu+10 Ala+10 Glu+10 Thr+10 Val+10 Le

#u+10 Ala+10 Thr+10 Met+10 Phe+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 365 ?

!+0

!CAC+10 GCA+10 CTG+10 GTA+10 TTC+10 ATG+10 AGG+10 GCG+10 CTG+10 GCA+10 GA

#C+10 GGC+10 AAT+10 TTC+10 GAT+10 GAC+10 +10 +10 +10 +10 3726 ?

!His+10 Ala+10 Leu+10 Val+10 Phe+10 Met+10 Arg+10 Ala+10 Leu+10 Ala+10 As

#p+10 Gly+10 Asn+10 Phe+10 Asp+10 Asp ?

!+10 +10 +10 +10 370+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 380 ?

!+0

!TAT+10 GAC+10 GAA+10 ACT+10 AGA+10 TAT+10 ATA+10 GAC+10 CCC+10 GTT+10 AA

#A+10 AAC+10 GAG+10 TAC+10 CTG+10 AAC+10 +10 +10 +10 +10 3774 ?

!Tyr+10 Asp+10 Glu+10 Thr+10 Arg+10 Tyr+10 Ile+10 Asp+10 Pro+10 Val+10 Ly

#s+10 Asn+10 Glu+10 Tyr+10 Leu+10 Asn ?

!385+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#00 ?

!+0

!GGA+10 GCC+10 GAG+10 GGT+10 ACT+10 CTG+10 TTA+10 CGG+10 GGC+10 ATA+10 GT

#G+10 GCC+10 TCC+10 AAC+10 ACC+10 GCT+10 +10 +10 +10 +10 3822 ?

!Gly+10 Ala+10 Glu+10 Gly+10 Thr+10 Leu+10 Leu+10 Arg+10 Gly+10 Ile+10 Va

#l+10 Ala+10 Ser+10 Asn+10 Thr+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 405+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415 ?

!+0

!CTG+10 GCG+10 GTG+10 GTT+10 TGC+10 GCA+10 AAC+10 ACC+10 TAT+10 TCG+10 AC

#G+10 ATA+10 AGA+10 AAA+10 CTC+10 CCG+10 +10 +10 +10 +10 3870 ?

!Leu+10 Ala+10 Val+10 Val+10 Cys+10 Ala+10 Asn+10 Thr+10 Tyr+10 Ser+10 Th

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88

PM

#r+10 Ile+10 Arg+10 Lys+10 Leu+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430 ?

!+0

!TCC+10 GTG+10 GCA+10 ACT+10 AGC+10 GCG+10 TGC+10 AAT+10 GTT+10 GCC+10 TA

#C+10 AGG+10 ACC+10 GAA+10 ACG+10 CTG+10 +10 +10 +10 +10 3918 ?

!Ser+10 Val+10 Ala+10 Thr+10 Ser+10 Ala+10 Cys+10 Asn+10 Val+10 Ala+10 Ty

#r+10 Arg+10 Thr+10 Glu+10 Thr+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 435+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 440+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 445 ?

!+0

!AAA+10 GCG+10 AGG+10 CGC+10 CCT+10 GGC+10 ATG+10 AGC+10 GAC+10 ATA+10 TA

#C+10 CGG+10 ATA+10 TTA+10 CAA+10 AAA+10 +10 +10 +10 +10 3966 ?

!Lys+10 Ala+10 Arg+10 Arg+10 Pro+10 Gly+10 Met+10 Ser+10 Asp+10 Ile+10 Ty

#r+10 Arg+10 Ile+10 Leu+10 Gln+10 Lys ?

!+10 +10 +10 +10 450+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 455+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 460 ?

!+0

!GAG+10 TTT+10 TTC+10 TTT+10 TAC+10 ATT+10 GCG+10 TGG+10 CTC+10 CAG+10 AG

#G+10 GTT+10 GCA+10 ACA+10 CAC+10 GCA+10 +10 +10 +10 +10 4014 ?

!Glu+10 Phe+10 Phe+10 Phe+10 Tyr+10 Ile+10 Ala+10 Trp+10 Leu+10 Gln+10 Ar

#g+10 Val+10 Ala+10 Thr+10 His+10 Ala ?

!465+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#80, ?

!+0

!AAT+10 TTC+10 TGT+10 TTA+10 AAC+10 ATT+10 CTG+10 AAG+10 AGA+10 AGC+10 GT

#G+10 GAT+10 ACG+10 GGC+10 CCC+10 CGC+10 +10 +10 +10 +10 4062 ?

!Asn+10 Phe+10 Cys+10 Leu+10 Asn+10 Ile+10 Leu+10 Lys+10 Arg+10 Ser+10 Va

#l+10 Asp+10 Thr+10 Gly+10 Pro+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 485+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 490+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 495 ?

!+0 .

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89

PM

!CAT+10 TTT+10 TGT+10 TCA+10 GGG+10 CCA+10 GCT+10 CGG+10 AGA+10 AGC+10 GG  
#C+10 TGC+10 AGC+10 AGT+10 TAAATAAA+10 +10 +10 +10 4112 ?  
!His+10 Phe+10 Cys+10 Ser+10 Gly+10 Pro+10 Ala+10 Arg+10 Arg+10 Ser+10 Gl  
#y+10 Cys+10 Ser+10 Ser ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 500+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 505+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 510 ?  
!+0  
!ATG+10 CTC+10 TGC+10 CCC+10 CTT+10 CTC+10 GTG+10 CCG+10 ATT+10 CAA+10 TA  
#T+10 GAA+10 GAC+10 TTT+10 TCG+10 AAG+10 +10 +10 +10 +10 4160 ?  
!Met+10 Leu+10 Cys+10 Pro+10 Leu+10 Leu+10 Val+10 Pro+10 Ile+10 Gln+10 Ty  
#r+10 Glu+10 Asp+10 Phe+10 Ser+10 Lys ?  
!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?  
!+0  
!GCC+10 ATG+10 GGG+10 TCT+10 GAG+10 CTC+10 AAG+10 AGG+10 GAA+10 AAG+10 TT  
#A+10 GAG+10 ACA+10 TTC+10 GTT+10 AAA+10 +10 +10 +10 +10 4208 ?  
!Ala+10 Met+10 Gly+10 Ser+10 Glu+10 Leu+10 Lys+10 Arg+10 Glu+10 Lys+10 Le  
#u+10 Glu+10 Thr+10 Phe+10 Val+10 Lys ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?  
!+0  
!GCT+10 ATT+10 TCC+10 AGC+10 GAC+10 AGG+10 GAC+10 CCG+10 AGG+10 GGG+10 TC  
#C+10 TTA+10 AGA+10 TTT+10 CTC+10 ATT+10 +10 +10 +10 +10 4256 ?  
!Ala+10 Ile+10 Ser+10 Ser+10 Asp+10 Arg+10 Asp+10 Pro+10 Arg+10 Gly+10 Se  
#r+10 Leu+10 Arg+10 Phe+10 Leu+10 Ile ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?  
!+0  
!TCG+10 GAC+10 CAT+10 GCA+10 AGG+10 GAA+10 ATT+10 ATT+10 GCA+10 GAC+10 GG  
#A+10 GTA+10 CGG+10 TTT+10 AAG+10 CCG+10 +10 +10 +10 +10 4304 ?  
!Ser+10 Asp+10 His+10 Ala+10 Arg+10 Glu+10 Ile+10 Ile+10 Ala+10 Asp+10 Gl  
#y+10 Val+10 Arg+10 Phe+10 Lys+10 Pro ?  
!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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90

PM

#+10 +10 +10 +10 +10 60 ?

!+0

!GTG+10 ATA+10 GAC+10 GAG+10 CCG+10 GTT+10 CGG+10 GCT+10 TCA+10 GTT+10 GC

#G+10 CTG+10 AGT+10 ACC+10 GCT+10 GCC+10 +10 +10 +10 +10 4352 ?

!Val+10 Ile+10 Asp+10 Glu+10 Pro+10 Val+10 Arg+10 Ala+10 Ser+10 Val+10 Al

#a+10 Leu+10 Ser+10 Thr+10 Ala+10 Ala ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!GCT+10 GGG+10 AAA+10 GTG+10 AAA+10 GCG+10 CGA+10 CGC+10 TTA+10 ACC+10 TC

#A+10 GTT+10 CGC+10 GCG+10 CCC+10 GTA+10 +10 +10 +10 +10 4400 ?

!Ala+10 Gly+10 Lys+10 Val+10 Lys+10 Ala+10 Arg+10 Arg+10 Leu+10 Thr+10 Se

#r+10 Val+10 Arg+10 Ala+10 Pro+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!CCG+10 CCC+10 GCA+10 GGC+10 GCC+10 GTT+10 TCC+10 GCG+10 CGC+10 CGG+10 AA

#A+10 TCG+10 GAA+10 ATA+10 TGA+10 TA+10 +10 +10 +10 +10 +10 4447 ?

!Pro+10 Pro+10 Ala+10 Gly+10 Ala+10 Val+10 Ser+10 Ala+10 Arg+10 Arg+10 Ly

#s+10 Ser+10 Glu+10 Ile+10 +10 \* ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!AAAATGCTTG+10 GCATTTGCGG+10 GCGAAGAGGC+10 GTGATCTGAA+10 GGGCTCCACA+10 AT

#GACGTAAC+10 +10 +10 4507 ?

!+0

!TGAGCTACGC+10 ATCCCTATAA+10 AGTGTACSCG+10 CTGACCGCTA+10 GCCCATAACAG+10 TG

#TTACAGGA+10 +10 +10 4567 ?

!+0

!GGGGAGAGAG+10 ACAACTTCAG+10 CTCGAAGTCT+10 GAAGAGACAT+10 C+10 ATG+10 AGC+10

#GGC+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4617 ?

!+0

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 Met+10 Ser+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1 ?

!+0

!TTC+10 AGT+10 AAC+10 ATA+10 GGA+10 TCG+10 ATT+10 GCC+10 ACC+10 GTT+10 TC

#C+10 CTA+10 GTA+10 TGC+10 TCG+10 CTT+10 +10 +10 +10 +10 4665 ?

!Phe+10 Ser+10 Asn+10 Ile+10 Gly+10 Ser+10 Ile+10 Ala+10 Thr+10 Val+10 Se

#r+10 Leu+10 Val+10 Cys+10 Ser+10 Leu ?

!+10 +10 +10 +10 +10 +10 5+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 15 ?

!+0

!TTG+10 TGC+10 GCA+10 TCT+10 GTA+10 TTA+10 GGG+10 GCG+10 CCG+10 GTA+10 CT

#G+10 GAC+10 GGG+10 CTC+10 GAG+10 TCG+10 +10 +10 +10 +10 4713 ?

!Leu+10 Cys+10 Ala+10 Ser+10 Val+10 Leu+10 Gly+10 Ala+10 Pro+10 Val+10 Le

#u+10 Asp+10 Gly+10 Leu+10 Glu+10 Ser ?

!+10 20+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 25+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 35 ?

!+0

!AGC+10 CCT+10 TTC+10 CCG+10 TTC+10 GGG+10 GGC+10 AAA+10 ATT+10 ATA+10 GC

#C+10 CAG+10 GCG+10 TGC+10 AAC+10 CGC+10 +10 +10 +10 +10 4761 ?

!Ser+10 Pro+10 Phe+10 Pro+10 Phe+10 Gly+10 Gly+10 Lys+10 Ile+10 Ile+10 Al

#a+10 Gln+10 Ala+10 Cys+10 Asn+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 40+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 45+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 50 ?

!+0

!ACC+10 ACG+10 ATT+10 GAG+10 GTG+10 ACG+10 GTC+10 CCG+10 TGG+10 AGC+10 GA

#C+10 TAC+10 TCT+10 GGT+10 CGC+10 ACC+10 +10 +10 +10 +10 4809 ?

!Thr+10 Thr+10 Ile+10 Glu+10 Val+10 Thr+10 Val+10 Pro+10 Trp+10 Ser+10 As

#p+10 Tyr+10 Ser+10 Gly+10 Arg+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 55+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 60+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 65 ?

!+0

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PM

!GAA+10 GGA+10 GTG+10 TCA+10 GTC+10 GAG+10 GTG+10 AAA+10 TGG+10 TTC+10 TA

#C+10 GGG+10 AAT+10 AGT+10 AAT+10 CCC+10 +10 +10 +10 +10 4857 ?

!Glu+10 Gly+10 Val+10 Ser+10 Val+10 Glu+10 Val+10 Lys+10 Trp+10 Phe+10 Ty

#r+10 Gly+10 Asn+10 Ser+10 Asn+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 70+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 75+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 80 ?

!+0

!GAA+10 AGC+10 TTC+10 GTG+10 TTC+10 GGG+10 GTG+10 GAT+10 AGC+10 GAA+10 AC

#G+10 GGC+10 AGT+10 GGA+10 CAC+10 GAG+10 +10 +10 +10 +10 4905 ?

!Glu+10 Ser+10 Phe+10 Val+10 Phe+10 Gly+10 Val+10 Asp+10 Ser+10 Glu+10 Th

#r+10 Gly+10 Ser+10 Gly+10 His+10 Glu ?

!+10 +10 +10 +10 +10 85+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 95 ?

!+0

!GAC+10 CTG+10 TCT+10 ACG+10 TGC+10 TGG+10 GCT+10 CTA+10 ATC+10 CAT+10 AA

#T+10 CTG+10 AAC+10 GCG+10 TCT+10 GTG+10 +10 +10 +10 +10 4953 ?

!Asp+10 Leu+10 Ser+10 Thr+10 Cys+10 Trp+10 Ala+10 Leu+10 Ile+10 His+10 As

#n+10 Leu+10 Asn+10 Ala+10 Ser+10 Val ?

!100+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#05+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#15 ?

!+0

!TGC+10 AGG+10 GCG+10 TCT+10 GAC+10 GCC+10 GGG+10 ATA+10 CCT+10 GAT+10 TT

#C+10 GAC+10 AAG+10 CAG+10 TGC+10 GAA+10 +10 +10 +10 +10 5001 ?

!Cys+10 Arg+10 Ala+10 Ser+10 Asp+10 Ala+10 Gly+10 Ile+10 Pro+10 Asp+10 Ph

#e+10 Asp+10 Lys+10 Gln+10 Cys+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 120+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 125+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 130 ?

!+0

!AAA+10 GTG+10 CAG+10 AGA+10 AGA+10 CTG+10 CGC+10 TCC+10 GGG+10 GTG+10 GA

#A+10 CTT+10 GGT+10 AGT+10 TAC+10 GTG+10 +10 +10 +10 +10 5049 ?

!Lys+10 Val+10 Gln+10 Arg+10 Arg+10 Leu+10 Arg+10 Ser+10 Gly+10 Val+10 Gl

#u+10 Leu+10 Gly+10 Ser+10 Tyr+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 135+10 +10 +10 +10 +10



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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 140+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 145 ?

!+0

!TCT+10 GGC+10 AAT+10 GGA+10 TCC+10 CTG+10 GTG+10 CTG+10 TAC+10 CCA+10 GG

#G+10 ATG+10 TAC+10 GAT+10 GCC+10 GGC+10 +10 +10 +10 +10 5097 ?

!Ser+10 Gly+10 Asn+10 Gly+10 Ser+10 Leu+10 Val+10 Leu+10 Tyr+10 Pro+10 Gl

#y+10 Met+10 Tyr+10 Asp+10 Ala+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 150+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 155+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 160 ?

!+0

!ATC+10 TAC+10 GCC+10 TAC+10 CAG+10 CTC+10 TCA+10 GTG+10 GGT+10 GGG+10 AA

#G+10 GGA+10 TAT+10 ACC+10 GGG+10 TCT+10 +10 +10 +10 +10 5145 ?

!Ile+10 Tyr+10 Ala+10 Tyr+10 Gln+10 Leu+10 Ser+10 Val+10 Gly+10 Gly+10 Ly

#s+10 Gly+10 Tyr+10 Thr+10 Gly+10 Ser ?

!+10 +10 +10 +10 165+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 170+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 175 ?

!+0

!GTT+10 TAT+10 CTA+10 GAC+10 GTC+10 GGA+10 CCA+10 AAC+10 CCC+10 GGA+10 TG

#C+10 CAC+10 GAC+10 CAG+10 TAT+10 GGG+10 +10 +10 +10 +10 5193 ?

!Val+10 Tyr+10 Leu+10 Asp+10 Val+10 Gly+10 Pro+10 Asn+10 Pro+10 Gly+10 Cy

#s+10 His+10 Asp+10 Gln+10 Tyr+10 Gly ?

!180+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#85+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#95 ?

!+0

!TAC+10 ACC+10 TAT+10 TAC+10 AGC+10 CTG+10 GCC+10 GAC+10 GAG+10 GCG+10 TC

#A+10 GAC+10 TTA+10 TCA+10 TCT+10 TAT+10 +10 +10 +10 +10 5241 ?

!Tyr+10 Thr+10 Tyr+10 Tyr+10 Ser+10 Leu+10 Ala+10 Asp+10 Glu+10 Ala+10 Se

#r+10 Asp+10 Leu+10 Ser+10 Ser+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 200+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 205+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 210 ?

!+0

!GAC+10 GTA+10 GCC+10 TCG+10 CCC+10 GAA+10 CTC+10 GAC+10 GGT+10 CCT+10 AT

#G+10 GAG+10 GAA+10 GAT+10 TAT+10 TCC+10 +10 +10 +10 +10 5289 ?

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PM

!Asp+10 Val+10 Ala+10 Ser+10 Pro+10 Glu+10 Leu+10 Asp+10 Gly+10 Pro+10 Me

#t+10 Glu+10 Glu+10 Asp+10 Tyr+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 215+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 220+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 225 ?

!+0

!AAT+10 TGT+10 CTA+10 GAC+10 ATG+10 CCC+10 CCG+10 CTA+10 CGC+10 CCA+10 TG

#G+10 ACA+10 ACC+10 GTT+10 TGT+10 TCG+10 +10 +10 +10 +10 5337 ?

!Asn+10 Cys+10 Leu+10 Asp+10 Met+10 Pro+10 Pro+10 Leu+10 Arg+10 Pro+10 Tr

#p+10 Thr+10 Thr+10 Val+10 Cys+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 230+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 235+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 240 ?

!+0

!CAT+10 GAC+10 GTC+10 GAG+10 GAG+10 CAG+10 GAA+10 AAC+10 GCC+10 ACG+10 GA

#C+10 GAG+10 CTT+10 TAC+10 CTA+10 TGG+10 +10 +10 +10 +10 5385 ?

!His+10 Asp+10 Val+10 Glu+10 Glu+10 Gln+10 Glu+10 Asn+10 Ala+10 Thr+10 As

#p+10 Glu+10 Leu+10 Tyr+10 Leu+10 Trp ?

!+10 +10 +10 +10 245+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 250+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 255 ?

!+0

!GAC+10 GAG+10 GAA+10 TGC+10 GCC+10 GGT+10 CCG+10 CTG+10 GAC+10 GAG+10 TA

#C+10 GTC+10 GAC+10 GAA+10 AGG+10 TCA+10 +10 +10 +10 +10 5433 ?

!Asp+10 Glu+10 Glu+10 Cys+10 Ala+10 Gly+10 Pro+10 Leu+10 Asp+10 Glu+10 Ty

#r+10 Val+10 Asp+10 Glu+10 Arg+10 Ser ?

!260+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#75 ?

!+0

!GAG+10 ACG+10 ATG+10 CCC+10 AGG+10 ATG+10 GTT+10 GTC+10 TTT+10 TCA+10 CC

#G+10 CCC+10 TCT+10 ACG+10 CTC+10 CAG+10 +10 +10 +10 +10 5481 ?

!Glu+10 Thr+10 Met+10 Pro+10 Arg+10 Met+10 Val+10 Val+10 Phe+10 Ser+10 Pr

#o+10 Pro+10 Ser+10 Thr+10 Leu+10 Gln ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 280+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 285+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 290 ?

!+0

!CAG+10 TAGCCACCCG+10 AGAGTGTTTT+10 TTGTGAGCGC+10 CCACGCAACA+10 TACCTAACT

#G+10 +10 +10 +10 +10 +10 +10 +10 +10 5534 ?

!Gln ?

!+0

!CTTCATTTCT+10 GATCAATTAT+10 TCGGTATTGA+10 ATAAATAAAC+10 AGTACAAAAG+10 CA

#TCAGGTGT+10 +10 +10 5594 ?

!+0

!GGTTTGCGTG+10 TCTGTGCTAA+10 ACCATGGCGT+10 GTGCGGGTGA+10 AACCGTAAAT+10 TA

#CGTGATAA+10 +10 +10 5654 ?

!+0

!TAAATAGCAT+10 AGGAGTTGGC+10 GTGCAGCGTA+10 TTTCGCCGAG+10 AG+10 ATG+10 GGG

#+10 ACA+10 ATG+10 +10 +10 +10 +10 +10 5708 ?

!+0

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 Met+10 Gly+10 Thr+10 Met ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1 ?

!+0

!TTA+10 GTG+10 TTG+10 CGC+10 CTT+10 TTC+10 CTA+10 CTT+10 GCA+10 GTA+10 GC

#G+10 GAC+10 GCG+10 GCG+10 TTG+10 CCG+10 +10 +10 +10 +10 5756 ?

!Leu+10 Val+10 Leu+10 Arg+10 Leu+10 Phe+10 Leu+10 Leu+10 Ala+10 Val+10 Al

#a+10 Asp+10 Ala+10 Ala+10 Leu+10 Pro ?

!+10 +10 5+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 20 ?

!+0

!ACC+10 GGC+10 AGA+10 TTC+10 TGC+10 CGA+10 GTT+10 TGG+10 AAG+10 GTG+10 CC

#T+10 CCG+10 GGA+10 GGA+10 ACC+10 ATC+10 +10 +10 +10 +10 5804 ?

!Thr+10 Gly+10 Arg+10 Phe+10 Cys+10 Arg+10 Val+10 Trp+10 Lys+10 Val+10 Pr

#o+10 Pro+10 Gly+10 Gly+10 Thr+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 35 ?

!+0

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!CAA+10 GAG+10 AAC+10 CTG+10 GCG+10 GTG+10 CTC+10 GCG+10 GAA+10 TCG+10 CC

#G+10 GTC+10 ACG+10 GGA+10 CAC+10 GCG+10 +10 +10 +10 +10 5852 ?

!Gln+10 Glu+10 Asn+10 Leu+10 Ala+10 Val+10 Leu+10 Ala+10 Glu+10 Ser+10 Pr

#o+10 Val+10 Thr+10 Gly+10 His+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 45+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 50 ?

!+0

!ACA+10 TAT+10 CCG+10 CCG+10 CCT+10 GAA+10 GGC+10 GCC+10 GTC+10 AGC+10 TT

#T+10 CAG+10 ATT+10 TTT+10 GCG+10 GAC+10 +10 +10 +10 +10 5900 ?

!Thr+10 Tyr+10 Pro+10 Pro+10 Pro+10 Glu+10 Gly+10 Ala+10 Val+10 Ser+10 Ph

#e+10 Gln+10 Ile+10 Phe+10 Ala+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 60+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 65 ?

!+0

!ACC+10 CCT+10 ACT+10 TTG+10 CGC+10 ATT+10 CGC+10 TAC+10 GGG+10 CCT+10 AC

#G+10 GAG+10 GAC+10 GAA+10 CTT+10 GCA+10 +10 +10 +10 +10 5948 ?

!Thr+10 Pro+10 Thr+10 Leu+10 Arg+10 Ile+10 Arg+10 Tyr+10 Gly+10 Pro+10 Th

#r+10 Glu+10 Asp+10 Glu+10 Leu+10 Ala ?

!+10 +10 +10 +10 +10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 80 ?

!+0

!CTG+10 GAG+10 CGC+10 GGG+10 ACG+10 TCC+10 GCC+10 TCA+10 GAC+10 GCG+10 GA

#C+10 AAC+10 GTG+10 ACA+10 TTT+10 TCG+10 +10 +10 +10 +10 5996 ?

!Leu+10 Glu+10 Arg+10 Gly+10 Thr+10 Ser+10 Ala+10 Ser+10 Asp+10 Ala+10 As

#p+10 Asn+10 Val+10 Thr+10 Phe+10 Ser ?

!+10 85+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#100 ?

!+0

!CTG+10 TCA+10 TAT+10 CGC+10 CCG+10 CGC+10 CCA+10 GAA+10 ATT+10 CAC+10 GG

#A+10 GCA+10 TAC+10 TTC+10 ACC+10 ATA+10 +10 +10 +10 +10 6044 ?

!Leu+10 Ser+10 Tyr+10 Arg+10 Pro+10 Arg+10 Pro+10 Glu+10 Ile+10 His+10 Gl

#y+10 Ala+10 Tyr+10 Phe+10 Thr+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10

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#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 115 ?

!+0

!GGG+10 GTA+10 TTC+10 GCT+10 ACT+10 GGC+10 CAG+10 AGC+10 ACG+10 GAA+10 AG

#C+10 AGC+10 TAT+10 TCG+10 GTC+10 ATC+10 +10 +10 +10 +10 6092 ?

!Gly+10 Val+10 Phe+10 Ala+10 Thr+10 Gly+10 Gln+10 Ser+10 Thr+10 Glu+10 Se

#r+10 Ser+10 Tyr+10 Ser+10 Val+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 125+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 130 ?

!+0

!AGT+10 CGG+10 GTC+10 TTA+10 GTT+10 AAC+10 GCC+10 TCT+10 CTG+10 GAA+10 CG

#G+10 TCC+10 GTG+10 CGC+10 CTG+10 GAA+10 +10 +10 +10 +10 6140 ?

!Ser+10 Arg+10 Val+10 Leu+10 Val+10 Asn+10 Ala+10 Ser+10 Leu+10 Glu+10 Ar

#g+10 Ser+10 Val+10 Arg+10 Leu+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 140+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 145 ?

!+0

!ACG+10 CCG+10 TGC+10 GAT+10 GAA+10 AAT+10 TTT+10 TTG+10 CAG+10 AAC+10 GA

#G+10 CCT+10 ACA+10 TGG+10 GGC+10 TCG+10 +10 +10 +10 +10 6188 ?

!Thr+10 Pro+10 Cys+10 Asp+10 Glu+10 Asn+10 Phe+10 Leu+10 Gln+10 Asn+10 Gl

#u+10 Pro+10 Thr+10 Trp+10 Gly+10 Ser ?

!+10 +10 +10 +10 150+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 155+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 160 ?

!+0

!AAG+10 CGT+10 TGG+10 TTA+10 GGC+10 CCC+10 CCG+10 TCG+10 CCT+10 TAT+10 GT

#G+10 CGA+10 GAT+10 AAC+10 GAT+10 GTC+10 +10 +10 +10 +10 6236 ?

!Lys+10 Arg+10 Trp+10 Leu+10 Gly+10 Pro+10 Pro+10 Ser+10 Pro+10 Tyr+10 Va

#l+10 Arg+10 Asp+10 Asn+10 Asp+10 Val ?

!165+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#80 ?

!+0

!GCC+10 GTG+10 TTG+10 ACA+10 AAA+10 GCG+10 CAG+10 TAC+10 ATT+10 GGG+10 GA

#G+10 TGC+10 TAC+10 TCC+10 AAC+10 TCG+10 +10 +10 +10 +10 6284 ?

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PM

!Ala+10 Val+10 Leu+10 Thr+10 Lys+10 Ala+10 Gln+10 Tyr+10 Ile+10 Gly+10 Gl  
#u+10 Cys+10 Tyr+10 Ser+10 Asn+10 Ser ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 195 ?  
!+0  
!GCG+10 GCC+10 CAG+10 ACG+10 GGG+10 CTC+10 ACG+10 TCT+10 CTC+10 AAC+10 AT  
#G+10 ACC+10 TTT+10 TTC+10 TAT+10 TCG+10 +10 +10 +10 +10 6332 ?  
!Ala+10 Ala+10 Gln+10 Thr+10 Gly+10 Leu+10 Thr+10 Ser+10 Leu+10 Asn+10 Me  
#t+10 Thr+10 Phe+10 Phe+10 Tyr+10 Ser ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 205+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 210 ?  
!+0  
!CCT+10 AAA+10 AGA+10 ATA+10 GTA+10 AAC+10 GTC+10 ACG+10 TGG+10 ACA+10 AC  
#C+10 GGC+10 GGC+10 CCC+10 TCC+10 CCC+10 +10 +10 +10 +10 6380 ?  
!Pro+10 Lys+10 Arg+10 Ile+10 Val+10 Asn+10 Val+10 Thr+10 Trp+10 Thr+10 Th  
#r+10 Gly+10 Gly+10 Pro+10 Ser+10 Pro ?  
!+10 +10 +10 +10 +10 +10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 220+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 225 ?  
!+0  
!TCG+10 CGC+10 ATA+10 ACG+10 GTA+10 TAC+10 TCG+10 TCG+10 CGG+10 GAG+10 AA  
#C+10 GGG+10 CAG+10 CCC+10 GTG+10 TTG+10 +10 +10 +10 +10 6428 ?  
!Ser+10 Arg+10 Ile+10 Thr+10 Val+10 Tyr+10 Ser+10 Ser+10 Arg+10 Glu+10 As  
#n+10 Gly+10 Gln+10 Pro+10 Val+10 Leu ?  
!+10 +10 +10 +10 230+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 235+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 240 ?  
!+0  
!AGG+10 AAC+10 GTT+10 TCT+10 GAC+10 GGG+10 TTC+10 TTG+10 GTT+10 AAG+10 TA  
#C+10 ACT+10 CCC+10 GAC+10 ATT+10 GAC+10 +10 +10 +10 +10 6476 ?  
!Arg+10 Asn+10 Val+10 Ser+10 Asp+10 Gly+10 Phe+10 Leu+10 Val+10 Lys+10 Ty  
#r+10 Thr+10 Pro+10 Asp+10 Ile+10 Asp ?  
!245+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#60 ?

!+0

!GGC+10 CGG+10 GCC+10 ATG+10 ATA+10 AAC+10 GTT+10 ATT+10 GCC+10 AAT+10 TA

#T+10 TCG+10 CCG+10 GCG+10 GAC+10 TCC+10 +10 +10 +10 +10 6524 ?

!Gly+10 Arg+10 Ala+10 Met+10 Ile+10 Asn+10 Val+10 Ile+10 Ala+10 Asn+10 Ty

#r+10 Ser+10 Pro+10 Ala+10 Asp+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 275 ?

!+0

!GGC+10 AGC+10 GTC+10 CTC+10 GCG+10 TTT+10 ACG+10 GCC+10 TTT+10 AGG+10 GA

#A+10 GGA+10 AAA+10 CTC+10 CCA+10 TCC+10 +10 +10 +10 +10 6572 ?

!Gly+10 Ser+10 Val+10 Leu+10 Ala+10 Phe+10 Thr+10 Ala+10 Phe+10 Arg+10 Gl

#u+10 Gly+10 Lys+10 Leu+10 Pro+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 285+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 290 ?

!+0

!GCG+10 ATT+10 CAA+10 CTG+10 CAC+10 CGG+10 ATA+10 GAT+10 ATG+10 TCC+10 GG

#G+10 ACT+10 GAG+10 CCG+10 CCG+10 GGG+10 +10 +10 +10 +10 6620 ?

!Ala+10 Ile+10 Gln+10 Leu+10 His+10 Arg+10 Ile+10 Asp+10 Met+10 Ser+10 Gl

#y+10 Thr+10 Glu+10 Pro+10 Pro+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 300+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 305 ?

!+0

!ACT+10 GAA+10 ACG+10 ACC+10 TTC+10 GAC+10 TGT+10 CAA+10 AAA+10 ATG+10 AT

#A+10 GAA+10 ACC+10 CCG+10 TAC+10 CGA+10 +10 +10 +10 +10 6668 ?

!Thr+10 Glu+10 Thr+10 Thr+10 Phe+10 Asp+10 Cys+10 Gln+10 Lys+10 Met+10 Il

#e+10 Glu+10 Thr+10 Pro+10 Tyr+10 Arg ?

!+10 +10 +10 +10 310+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 315+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 320 ?

!+0

!GCG+10 CTC+10 GGG+10 AGC+10 AAT+10 GTT+10 CCC+10 AGG+10 GAC+10 GAC+10 TC

#T+10 ATC+10 CGT+10 CCG+10 GGG+10 GCC+10 +10 +10 +10 +10 6716 ?

!Ala+10 Leu+10 Gly+10 Ser+10 Asn+10 Val+10 Pro+10 Arg+10 Asp+10 Asp+10 Se

#r+10 Ile+10 Arg+10 Pro+10 Gly+10 Ala ?

!325+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

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100

PM

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#40 ?

!+0

!ACT+10 CTG+10 CCT+10 CCG+10 TTC+10 GAT+10 ACC+10 GCA+10 GCA+10 CCT+10 GA

#T+10 TTC+10 GAT+10 ACA+10 GGT+10 ACT+10 +10 +10 +10 +10 6764 ?

!Thr+10 Leu+10 Pro+10 Pro+10 Phe+10 Asp+10 Thr+10 Ala+10 Ala+10 Pro+10 As

#p+10 Phe+10 Asp+10 Thr+10 Gly+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 355 ?

!+0

!TCC+10 CCG+10 ACC+10 CCC+10 ACT+10 ACC+10 GTG+10 CCA+10 GAG+10 CCA+10 GC

#C+10 ATT+10 ACT+10 ACA+10 CTC+10 ATA+10 +10 +10 +10 +10 6812 ?

!Ser+10 Pro+10 Thr+10 Pro+10 Thr+10 Thr+10 Val+10 Pro+10 Glu+10 Pro+10 Al

#a+10 Ile+10 Thr+10 Thr+10 Leu+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 365+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 370 ?

!+0

!CCG+10 CGC+10 AGC+10 ACT+10 AGC+10 GAT+10 ATG+10 GGA+10 TTC+10 TTC+10 TC

#C+10 ACG+10 GCA+10 CGT+10 GCT+10 ACC+10 +10 +10 +10 +10 6860 ?

!Pro+10 Arg+10 Ser+10 Thr+10 Ser+10 Asp+10 Met+10 Gly+10 Phe+10 Phe+10 Se

#r+10 Thr+10 Ala+10 Arg+10 Ala+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 380+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 385 ?

!+0

!GGA+10 TCA+10 GAA+10 ACT+10 CTT+10 TCG+10 GTA+10 CCC+10 GTC+10 CAG+10 GA

#A+10 ACG+10 GAT+10 AGA+10 ACT+10 CTT+10 +10 +10 +10 +10 6908 ?

!Gly+10 Ser+10 Glu+10 Thr+10 Leu+10 Ser+10 Val+10 Pro+10 Val+10 Gln+10 Gl

#u+10 Thr+10 Asp+10 Arg+10 Thr+10 Leu ?

!+10 +10 +10 +10 390+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 395+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 400 ?

!+0

!TCG+10 ACA+10 ACT+10 CCT+10 CTT+10 ACC+10 CTT+10 CCA+10 CTG+10 ACT+10 CC

#C+10 GGT+10 GAG+10 TCA+10 GAA+10 AAT+10 +10 +10 +10 +10 6956 ?



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101

PM

!Ser+10 Thr+10 Thr+10 Pro+10 Leu+10 Thr+10 Leu+10 Pro+10 Leu+10 Thr+10 Pr

#o+10 Gly+10 Glu+10 Ser+10 Glu+10 Asn ?

!405+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#20 ?

!+0

!ACA+10 CTG+10 TTT+10 CCT+10 ACG+10 ACC+10 GCG+10 CCG+10 GGG+10 ATT+10 TC

#T+10 ACC+10 GAG+10 ACC+10 CCG+10 AGC+10 +10 +10 +10 +10 7004 ?

!Thr+10 Leu+10 Phe+10 Pro+10 Thr+10 Thr+10 Ala+10 Pro+10 Gly+10 Ile+10 Se

#r+10 Thr+10 Glu+10 Thr+10 Pro+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 435 ?

!+0

!GCG+10 GCA+10 CAT+10 GAA+10 ACT+10 ACA+10 CAG+10 ACC+10 CAG+10 AGT+10 GC

#A+10 GAA+10 ACG+10 GTG+10 GTC+10 TTT+10 +10 +10 +10 +10 7052 ?

!Ala+10 Ala+10 His+10 Glu+10 Thr+10 Thr+10 Gln+10 Thr+10 Gln+10 Ser+10 Al

#a+10 Glu+10 Thr+10 Val+10 Val+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 440+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 445+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 450 ?

!+0

!ACT+10 CAG+10 AGT+10 CCG+10 AGT+10 ACC+10 GAG+10 TCG+10 GAA+10 ACC+10 GC

#G+10 CGG+10 TCC+10 CAG+10 AGT+10 CAG+10 +10 +10 +10 +10 7100 ?

!Thr+10 Gln+10 Ser+10 Pro+10 Ser+10 Thr+10 Glu+10 Ser+10 Glu+10 Thr+10 Al

#a+10 Arg+10 Ser+10 Gln+10 Ser+10 Gln ?

!+10 +10 +10 +10 +10 +10 +10 +10 455+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 460+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 465 ?

!+0

!GAA+10 CCG+10 TGG+10 TAT+10 TTT+10 ACT+10 CAG+10 ACT+10 CCG+10 AGT+10 AC

#T+10 GAA+10 CAG+10 GCG+10 GCT+10 CTT+10 +10 +10 +10 +10 7148 ?

!Glu+10 Pro+10 Trp+10 Tyr+10 Phe+10 Thr+10 Gln+10 Thr+10 Pro+10 Ser+10 Th

#r+10 Glu+10 Gln+10 Ala+10 Ala+10 Leu ?

!+10 +10 +10 +10 470+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 475+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 480 ?

!+0

!ACT+10 CAG+10 ACG+10 CAG+10 ATC+10 GCA+10 GAA+10 ACG+10 GAG+10 GCG+10 TT

#G+10 TTT+10 ACT+10 CAG+10 ACT+10 CCG+10 +10 +10 +10 +10 7196 ?

!Thr+10 Gln+10 Thr+10 Gln+10 Ile+10 Ala+10 Glu+10 Thr+10 Glu+10 Ala+10 Le

#u+10 Phe+10 Thr+10 Gln+10 Thr+10 Pro ?

!485+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#00 ?

!+0

!AGT+10 GCT+10 GAA+10 CAG+10 ATG+10 ACT+10 TTT+10 ACT+10 CAG+10 ACT+10 CC

#G+10 GGT+10 GCA+10 GAA+10 ACC+10 GAG+10 +10 +10 +10 +10 7244 ?

!Ser+10 Ala+10 Glu+10 Gln+10 Met+10 Thr+10 Phe+10 Thr+10 Gln+10 Thr+10 Pr

#o+10 Gly+10 Ala+10 Glu+10 Thr+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 505+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 510+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 515 ?

!+0

!GCA+10 CCT+10 GCC+10 CAG+10 ACC+10 CCG+10 AGC+10 ACG+10 ATA+10 CCC+10 GA

#G+10 ATA+10 TTT+10 ACT+10 CAG+10 TCT+10 +10 +10 +10 +10 7292 ?

!Ala+10 Pro+10 Ala+10 Gln+10 Thr+10 Pro+10 Ser+10 Thr+10 Ile+10 Pro+10 Gl

#u+10 Ile+10 Phe+10 Thr+10 Gln+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 520+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 525+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 530 ?

!+0

!CGT+10 AGC+10 ACG+10 CCC+10 CCC+10 GAA+10 ACC+10 GCT+10 CGC+10 GCT+10 CC

#G+10 AGC+10 GCG+10 GCG+10 CCG+10 GAG+10 +10 +10 +10 +10 7340 ?

!Arg+10 Ser+10 Thr+10 Pro+10 Pro+10 Glu+10 Thr+10 Ala+10 Arg+10 Ala+10 Pr

#o+10 Ser+10 Ala+10 Ala+10 Pro+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 535+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 540+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 545 ?

!+0

!GTT+10 TTT+10 ACA+10 CAG+10 AGT+10 TCG+10 AGT+10 ACG+10 GTA+10 ACG+10 GA

#G+10 GTG+10 TTT+10 ACT+10 CAG+10 ACC+10 +10 +10 +10 +10 7388 ?

!Val+10 Phe+10 Thr+10 Gln+10 Ser+10 Ser+10 Ser+10 Thr+10 Val+10 Thr+10 Gl

#u+10 Val+10 Phe+10 Thr+10 Gln+10 Thr ?

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103

PM

!+10 +10 +10 +10 550+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 555+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 560 ?

!+0

!CCG+10 AGC+10 ACG+10 GTA+10 CCG+10 AAA+10 ACT+10 ACT+10 CTG+10 AGT+10 TC

#G+10 AGT+10 ACT+10 GAA+10 CCG+10 GCG+10 +10 +10 +10 +10 7436 ?

!Pro+10 Ser+10 Thr+10 Val+10 Pro+10 Lys+10 Thr+10 Thr+10 Leu+10 Ser+10 Se

#r+10 Ser+10 Thr+10 Glu+10 Pro+10 Ala ?

!565+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#80 ?

!+0

!ATT+10 TTT+10 ACT+10 CGG+10 ACT+10 CAG+10 AGC+10 GCG+10 GGA+10 ACT+10 GA

#G+10 GCC+10 TTT+10 ACT+10 CAG+10 ACT+10 +10 +10 +10 +10 7484 ?

!Ile+10 Phe+10 Thr+10 Arg+10 Thr+10 Gln+10 Ser+10 Ala+10 Gly+10 Thr+10 Gl

#u+10 Ala+10 Phe+10 Thr+10 Gln+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 585+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 590+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 595 ?

!+0

!TCG+10 AGT+10 GCC+10 GAG+10 CCG+10 GAC+10 ACT+10 ATG+10 CGA+10 ACT+10 CA

#G+10 AGT+10 ACT+10 GAA+10 ACA+10 CAC+10 +10 +10 +10 +10 7532 ?

!Ser+10 Ser+10 Ala+10 Glu+10 Pro+10 Asp+10 Thr+10 Met+10 Arg+10 Thr+10 Gl

#n+10 Ser+10 Thr+10 Glu+10 Thr+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 600+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 605+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 610 ?

!+0

!TTT+10 TTC+10 ACT+10 CAG+10 GCC+10 CCG+10 AGT+10 ACG+10 GTA+10 CCG+10 AA

#A+10 GCT+10 ACT+10 CAG+10 ACT+10 CCG+10 +10 +10 +10 +10 7580 ?

!Phe+10 Phe+10 Thr+10 Gln+10 Ala+10 Pro+10 Ser+10 Thr+10 Val+10 Pro+10 Ly

#s+10 Ala+10 Thr+10 Gln+10 Thr+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 615+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 620+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 625 ?

!+0

!AGT+10 ACA+10 GAG+10 CCG+10 GAG+10 GTG+10 TTG+10 ACT+10 CAG+10 AGT+10 CC

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104

PM

#G+10 AGT+10 ACC+10 GAA+10 CCT+10 GTG+10 +10 +10 +10 +10 7628 ?

!Ser+10 Thr+10 Glu+10 Pro+10 Glu+10 Val+10 Leu+10 Thr+10 Gln+10 Ser+10 Pr  
#o+10 Ser+10 Thr+10 Glu+10 Pro+10 Val ?

!+10 +10 +10 +10 630+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 635+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 640 ?

!+0

!CCT+10 TTC+10 ACC+10 CGG+10 ACT+10 CTG+10 GGC+10 GCA+10 GAG+10 CCG+10 GA

#A+10 ATT+10 ACT+10 CAG+10 ACC+10 CCG+10 +10 +10 +10 +10 7676 ?

!Pro+10 Phe+10 Thr+10 Arg+10 Thr+10 Leu+10 Gly+10 Ala+10 Glu+10 Pro+10 Gl  
#u+10 Ile+10 Thr+10 Gln+10 Thr+10 Pro ?

!645+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 6

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 6

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 6

#60 ?

!+0

!AGC+10 GCG+10 GCA+10 CCG+10 GAG+10 GTT+10 TAT+10 ACT+10 CGG+10 AGT+10 TC

#G+10 AGT+10 ACG+10 ATG+10 CCA+10 GAA+10 +10 +10 +10 +10 7724 ?

!Ser+10 Ala+10 Ala+10 Pro+10 Glu+10 Val+10 Tyr+10 Thr+10 Arg+10 Ser+10 Se  
#r+10 Ser+10 Thr+10 Met+10 Pro+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 665+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 670+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 675 ?

!+0

!ACT+10 GCA+10 CAG+10 AGC+10 ACA+10 CCC+10 CTG+10 GCC+10 TCG+10 CAA+10 AA

#C+10 CCT+10 ACC+10 AGT+10 TCG+10 GGA+10 +10 +10 +10 +10 7772 ?

!Thr+10 Ala+10 Gln+10 Ser+10 Thr+10 Pro+10 Leu+10 Ala+10 Ser+10 Gln+10 As  
#n+10 Pro+10 Thr+10 Ser+10 Ser+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 680+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 685+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 690 ?

!+0

!ACC+10 GGG+10 ACG+10 CAT+10 AAT+10 ACT+10 GAA+10 CCG+10 AGG+10 ACT+10 TA

#T+10 CCA+10 GTG+10 CAA+10 ACG+10 ACA+10 +10 +10 +10 +10 7820 ?

!Thr+10 Gly+10 Thr+10 His+10 Asn+10 Thr+10 Glu+10 Pro+10 Arg+10 Thr+10 Ty  
#r+10 Pro+10 Val+10 Gln+10 Thr+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 695+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 700+10 +10 +10 +10 +10 +10 +10 +10 +10

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

105

PM

#+10 +10 +10 +10 +10 +10 +10 705 ?

!+0

!CCA+10 CAT+10 ACC+10 CAG+10 AAA+10 CTC+10 TAC+10 ACA+10 GAA+10 AAT+10 AA

#G+10 ACT+10 TTA+10 TCG+10 TTT+10 CCT+10 +10 +10 +10 +10 7868 ?

!Pro+10 His+10 Thr+10 Gln+10 Lys+10 Leu+10 Tyr+10 Thr+10 Glu+10 Asn+10 Ly

#s+10 Thr+10 Leu+10 Ser+10 Phe+10 Pro ?

!+10 +10 +10 +10 710+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 715+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 720 ?

!+0

!ACT+10 GTT+10 GTT+10 TCA+10 GAA+10 TTC+10 CAT+10 GAG+10 ATG+10 TCG+10 AC

#G+10 GCA+10 GAG+10 TCG+10 CAG+10 ACG+10 +10 +10 +10 +10 7916 ?

!Thr+10 Val+10 Val+10 Ser+10 Glu+10 Phe+10 His+10 Glu+10 Met+10 Ser+10 Th

#r+10 Ala+10 Glu+10 Ser+10 Gln+10 Thr ?

!725+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 7

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 7

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 7

#40 ?

!+0

!CCC+10 CTA+10 TTG+10 GAC+10 GTC+10 AAA+10 ATT+10 GTA+10 GAG+10 GTG+10 AA

#G+10 TTT+10 TCA+10 AAC+10 GAT+10 GGC+10 +10 +10 +10 +10 7964 ?

!Pro+10 Leu+10 Leu+10 Asp+10 Val+10 Lys+10 Ile+10 Val+10 Glu+10 Val+10 Ly

#s+10 Phe+10 Ser+10 Asn+10 Asp+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 745+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 750+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 755 ?

!+0

!GAA+10 GTA+10 ACG+10 GCG+10 ACT+10 TGC+10 GTT+10 TCC+10 ACC+10 GTC+10 AA

#A+10 TCT+10 CCC+10 TAT+10 AGG+10 GTA+10 +10 +10 +10 +10 8012 ?

!Glu+10 Val+10 Thr+10 Ala+10 Thr+10 Cys+10 Val+10 Ser+10 Thr+10 Val+10 Ly

#s+10 Ser+10 Pro+10 Tyr+10 Arg+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 760+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 765+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 770 ?

!+0

!GAA+10 ACT+10 AAT+10 TGG+10 AAA+10 GTA+10 GAC+10 CTC+10 GTA+10 GAT+10 GT

#A+10 ATG+10 GAT+10 GAA+10 ATT+10 TCT+10 +10 +10 +10 +10 8060 ?

!Glu+10 Thr+10 Asn+10 Trp+10 Lys+10 Val+10 Asp+10 Leu+10 Val+10 Asp+10 Va

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PM

#l+10 Met+10 Asp+10 Glu+10 Ile+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 775+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 780+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 785 ?

!+0

!GGG+10 AAC+10 AGT+10 CCC+10 GCC+10 GGG+10 GTT+10 TTT+10 AAC+10 AGT+10 AA

#T+10 GAG+10 AAA+10 TGG+10 CAG+10 AAA+10 +10 +10 +10 +10 8108 ?

!Gly+10 Asn+10 Ser+10 Pro+10 Ala+10 Gly+10 Val+10 Phe+10 Asn+10 Ser+10 As

#n+10 Glu+10 Lys+10 Trp+10 Gln+10 Lys ?

!+10 +10 +10 +10 790+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 795+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 800 ?

!+0

!CAG+10 CTG+10 TAC+10 TAC+10 AGA+10 GTA+10 ACC+10 GAT+10 GGA+10 AGA+10 AC

#A+10 TCG+10 GTC+10 CAG+10 CTA+10 ATG+10 +10 +10 +10 +10 8156 ?

!Gln+10 Leu+10 Tyr+10 Tyr+10 Arg+10 Val+10 Thr+10 Asp+10 Gly+10 Arg+10 Th

#r+10 Ser+10 Val+10 Gln+10 Leu+10 Met ?

!805+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 8

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 8

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 8

#20 ?

!+0

!TGC+10 CTG+10 TCG+10 TGC+10 ACG+10 AGC+10 CAT+10 TCT+10 CCG+10 GAA+10 CC

#T+10 TAC+10 TGT+10 CTT+10 TTC+10 GAC+10 +10 +10 +10 +10 8204 ?

!Cys+10 Leu+10 Ser+10 Cys+10 Thr+10 Ser+10 His+10 Ser+10 Pro+10 Glu+10 Pr

#o+10 Tyr+10 Cys+10 Leu+10 Phe+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 825+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 830+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 835 ?

!+0

!ACG+10 TCT+10 CTT+10 ATA+10 GCG+10 AGG+10 GAA+10 AAA+10 GAT+10 ATC+10 GC

#G+10 CCA+10 GAG+10 TTA+10 TAC+10 TTT+10 +10 +10 +10 +10 8252 ?

!Thr+10 Ser+10 Leu+10 Ile+10 Ala+10 Arg+10 Glu+10 Lys+10 Asp+10 Ile+10 Al

#a+10 Pro+10 Glu+10 Leu+10 Tyr+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 840+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 845+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 850 ?

!+0

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PM

!ACC+10 TCT+10 GAT+10 CCG+10 CAA+10 ACG+10 GCA+10 TAC+10 TGC+10 ACA+10 AT

#A+10 ACT+10 CTG+10 CCG+10 TCC+10 GGC+10 +10 +10 +10 +10 8300 ?

!Thr+10 Ser+10 Asp+10 Pro+10 Gln+10 Thr+10 Ala+10 Tyr+10 Cys+10 Thr+10 Il

#e+10 Thr+10 Leu+10 Pro+10 Ser+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 855+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 860+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 865 ?

!+0

!GTT+10 GTT+10 CCG+10 AGA+10 TTC+10 GAA+10 TGG+10 AGC+10 CTT+10 AAT+10 AA

#T+10 GTT+10 TCA+10 CTG+10 CCG+10 GAA+10 +10 +10 +10 +10 8348 ?

!Val+10 Val+10 Pro+10 Arg+10 Phe+10 Glu+10 Trp+10 Ser+10 Leu+10 Asn+10 As

#n+10 Val+10 Ser+10 Leu+10 Pro+10 Glu ?

!+10 +10 +10 +10 870+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 875+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 880 ?

!+0

!TAT+10 TTG+10 ACG+10 GCC+10 ACG+10 ACC+10 GTT+10 GTT+10 TCG+10 CAT+10 AC

#C+10 GCT+10 GGC+10 CAA+10 AGT+10 ACA+10 +10 +10 +10 +10 8396 ?

!Tyr+10 Leu+10 Thr+10 Ala+10 Thr+10 Thr+10 Val+10 Val+10 Ser+10 His+10 Th

#r+10 Ala+10 Gly+10 Gln+10 Ser+10 Thr ?

!885+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 8

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 8

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 9

#00 ?

!+0

!GTG+10 TGG+10 AAG+10 AGC+10 AGC+10 GCG+10 AGA+10 GCA+10 GGC+10 GAG+10 GC

#G+10 TGG+10 ATT+10 TCT+10 GGC+10 CGG+10 +10 +10 +10 +10 8444 ?

!Val+10 Trp+10 Lys+10 Ser+10 Ser+10 Ala+10 Arg+10 Ala+10 Gly+10 Glu+10 Al

#a+10 Trp+10 Ile+10 Ser+10 Gly+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 905+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 910+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 915 ?

!+0

!GGA+10 GGC+10 AAT+10 ATA+10 TAC+10 GAA+10 TGC+10 ACC+10 GTC+10 CTC+10 AT

#C+10 TCA+10 GAC+10 GGC+10 ACT+10 CGC+10 +10 +10 +10 +10 8492 ?

!Gly+10 Gly+10 Asn+10 Ile+10 Tyr+10 Glu+10 Cys+10 Thr+10 Val+10 Leu+10 Il

#e+10 Ser+10 Asp+10 Gly+10 Thr+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 920+10 +10 +10 +10 +10 +10

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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 925+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 930 ?

!+0

!GTT+10 ACT+10 ACG+10 CGA+10 AAG+10 GAG+10 AGG+10 TGC+10 TTA+10 ACA+10 AA

#C+10 ACA+10 TGG+10 ATT+10 GCG+10 GTG+10 +10 +10 +10 +10 8540 ?

!Val+10 Thr+10 Thr+10 Arg+10 Lys+10 Glu+10 Arg+10 Cys+10 Leu+10 Thr+10 As

#n+10 Thr+10 Trp+10 Ile+10 Ala+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 935+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 940+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 945 ?

!+0

!GAA+10 AAC+10 GGT+10 GCT+10 GCT+10 CAG+10 GCG+10 CAG+10 CTG+10 TAT+10 TC

#A+10 CTC+10 TTT+10 TCT+10 GGA+10 CTT+10 +10 +10 +10 +10 8588 ?

!Glu+10 Asn+10 Gly+10 Ala+10 Ala+10 Gln+10 Ala+10 Gln+10 Leu+10 Tyr+10 Se

#r+10 Leu+10 Phe+10 Ser+10 Gly+10 Leu ?

!+10 +10 +10 +10 950+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 955+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 960 ?

!+0

!GTG+10 TCA+10 GGA+10 TTA+10 TGC+10 GGG+10 AGC+10 ATA+10 TCT+10 GCT+10 TT

#G+10 TAC+10 GCA+10 ACG+10 CTA+10 TGG+10 +10 +10 +10 +10 8636 ?

!Val+10 Ser+10 Gly+10 Leu+10 Cys+10 Gly+10 Ser+10 Ile+10 Ser+10 Ala+10 Le

#u+10 Tyr+10 Ala+10 Thr+10 Leu+10 Trp ?

!965+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 9

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 9

#75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 9

#80 ?

!+0

!ACC+10 GCC+10 ATT+10 TAT+10 TTT+10 TGAGGAATGC+10 TTTTGGACT+10 ATCGTACTG

#C+10 TTTCTTCCTT+10 +10 +10 +10 +10 8691 ?

!Thr+10 Ala+10 Ile+10 Tyr+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 985 ?

!+0

!CGCTAGCCAG+10 AGCACCGCCG+10 CCGTCACGTA+10 CGACTACATT+10 TTAGGCCGTC+10 GC

#GCGCTCGA+10 +10 +10 8751 ?

!+0

!CGCGCTAACC+10 ATACCGGCGG+10 TTGGCCCGTA+10 TAACAGATAC+10 CTCACTAGGG+10 TA

#TCAAGAGG+10 +10 +10 8811 ?



!+0

!CTGCGACGTT+10 GTCGAGCTCA+10 ACCCGATTTC+10 TAACGTGGAC+10 GACATGATAT+10 CG  
#GCGGCCAA+10 +10 +10 8871 ?

!+0

!AGAAAAAGAG+10 AAGGGGGGCC+10 CTTTCGAGGC+10 CTCCGTCGTC+10 TGGTTCCTACG+10 TG  
#ATTAAGGG+10 +10 +10 8931 ?

!+0

!CGACGACGGC+10 GAGGACAAGT+10 ACTGTCCAAT+10 CTATAGAAAA+10 GAGTACAGGG+10 AA  
#TGTGGCGA+10 +10 +10 8991 ?

!+0

!CGTACAACG+10 CTATCTGAAT+10 GCGCCGTTCA+10 ATCTGCACAG+10 ATGTGGGCAG+10 TG  
#GACTATGT+10 +10 +10 9051 ?

!+0

!TCCTAGCACCC+10 CTTGTATCGC+10 GAAATGGCGC+10 GGGACTGACT+10 ATATTCTCCC+10 CC  
#ACTGCTGC+10 +10 +10 9111 ?

!+0

!GCTCTCTGGC+10 CAATACTTGC+10 TGACCCTGAA+10 AATCGGGAGA+10 TTTGCGCAAA+10 CA  
#GCTCTCGT+10 +10 +10 9171 ?

!+0

!AACTCTAGAA+10 GTTAACGATC+10 GCTGTTTAAA+10 GATCGGGTCG+10 CAGCTTAACT+10 TT  
#TTACCGTC+10 +10 +10 9231 ?

!+0

!GAAATGCTGG+10 ACAACAGAAC+10 AGTATCAGAC+10 TGGATTTCAA+10 GGCGAACACC+10 TT  
#TATCCGAT+10 +10 +10 9291 ?

!+0

!CGCAGACACC+10 AATACACGAC+10 ACGCGGACGA+10 CGTATATCGG+10 GGATACGAAG+10 AT  
#ATTCTGCA+10 +10 +10 9351 ?

!+0

!GCGCTGGAAT+10 AATTTGCTGA+10 GGAAAAAGAA+10 TCCTAGCGCG+10 CCAGACCCCTC+10 GT  
#CCAGATAG+10 +10 +10 9411 ?

!+0

!CGTCCCGCAA+10 GAAATTCCCG+10 CTGTAACCAA+10 GAAAGCGGAA+10 GGGCGCACCC+10 CG  
#GACGCAGA+10 +10 +10 9471 ?

!+0

!AAGCAGCGAA+10 AAGAAGGCCC+10 CTCCAGAAGA+10 CTCGGAGGAC+10 GACATGCAGG+10 CA  
#GAGGCTTC+10 +10 +10 9531 ?

!+0

!TGGAGAAAAT+10 CCTGCCGCC+10 TCCCCGAAGA+10 CGACGAAGTC+10 CCCGAGGACA+10 CC

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PM

#GAGCACGA+10 +10 +10 9591 ?

!+0

!TGATCCAAAC+10 TCGGATCCTG+10 ACTATTACAA+10 TGACATGCCC+10 GCCGTGATCC+10 CG

#GTGGAGGA+10 +10 +10 9651 ?

!+0

!GACTACTAAA+10 AGTTCTAATG+10 CCGTCTCCAT+10 GCCCATATTC+10 GCGGCGTTCG+10 TA

#GCCTGCGC+10 +10 +10 9711 ?

!+0

!GGTCGCGCTC+10 GTGGGGCTAC+10 TGGTTTGGAG+10 CATCGTAAAA+10 TGC GCGCGTA+10 GC

#TAATCGAG+10 +10 +10 9771 ?

!+0

!CCTAGAATAG+10 GTGGTTTCTT+10 CCTACATGCC+10 ACGCCTCACG+10 CTCATAATAT+10 AA

#ATCACATG+10 +10 +10 9831 ?

!+0

!GAATAGCATA+10 CCAATGCCTA+10 TTCATTGGGA+10 CGTTCGAAAA+10 GC+10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#9873 ?

!+0

!ATG+10 GCA+10 TCG+10 CTA+10 CTT+10 GGA+10 ACT+10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 9894 ?

!Met+10 Ala+10 Ser+10 Leu+10 Leu+10 Gly+10 Thr ?

!+10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5 ?

!+0

!CTG+10 GCT+10 CTC+10 CTT+10 GCC+10 GCG+10 ACG+10 CTC+10 GCA+10 CCC+10 TT

#C+10 GGC+10 GCG+10 ATG+10 GGA+10 ATC+10 +10 +10 +10 +10 9942 ?

!Leu+10 Ala+10 Leu+10 Leu+10 Ala+10 Ala+10 Thr+10 Leu+10 Ala+10 Pro+10 Ph

#e+10 Gly+10 Ala+10 Met+10 Gly+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 10+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 15+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 20 ?

!+0

!GTG+10 ATC+10 ACT+10 GGA+10 AAT+10 CAC+10 GTC+10 TCC+10 GCC+10 AGG+10 AT

#T+10 GAC+10 GAC+10 GAT+10 CAC+10 ATC+10 +10 +10 +10 +10 9990 ?

!Val+10 Ile+10 Thr+10 Gly+10 Asn+10 His+10 Val+10 Ser+10 Ala+10 Arg+10 Il

#e+10 Asp+10 Asp+10 Asp+10 His+10 Ile ?

!+10 +10 +10 +10 +10 25+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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111

PM

#+10 +10 +10 +10 +10 35 ?

!+0

!GTG+10 ATC+10 GTC+10 GCG+10 CCT+10 CGC+10 CCC+10 GAA+10 GCT+10 ACA+10 AT

#T+10 CAA+10 CTG+10 CAG+10 CTA+10 TTT+10 +10 +10 +10 10038 ?

!Val+10 Ile+10 Val+10 Ala+10 Pro+10 Arg+10 Pro+10 Glu+10 Ala+10 Thr+10 Il

#e+10 Gln+10 Leu+10 Gln+10 Leu+10 Phe ?

!+10 40+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 45+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 55 ?

!+0

!TTC+10 ATG+10 CCT+10 GGC+10 CAG+10 AGA+10 CCC+10 CAC+10 AAA+10 CCC+10 TA

#C+10 TCA+10 GGA+10 ACC+10 GTC+10 CGC+10 +10 +10 +10 10086 ?

!Phe+10 Met+10 Pro+10 Gly+10 Gln+10 Arg+10 Pro+10 His+10 Lys+10 Pro+10 Ty

#r+10 Ser+10 Gly+10 Thr+10 Val+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 60+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 65+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 70 ?

!+0

!GTC+10 GCG+10 TTT+10 CGG+10 TCT+10 GAT+10 ATA+10 ACA+10 AAC+10 CAG+10 TG

#C+10 TAC+10 CAG+10 GAA+10 CTT+10 AGC+10 +10 +10 +10 10134 ?

!Val+10 Ala+10 Phe+10 Arg+10 Ser+10 Asp+10 Ile+10 Thr+10 Asn+10 Gln+10 Cy

#s+10 Tyr+10 Gln+10 Glu+10 Leu+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 75+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 80+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85 ?

!+0

!GAG+10 GAG+10 CGC+10 TTT+10 GAA+10 AAT+10 TGC+10 ACT+10 CAT+10 CGA+10 TC

#G+10 TCT+10 TCT+10 GTT+10 TTT+10 GTC+10 +10 +10 +10 10182 ?

!Glu+10 Glu+10 Arg+10 Phe+10 Glu+10 Asn+10 Cys+10 Thr+10 His+10 Arg+10 Se

#r+10 Ser+10 Ser+10 Val+10 Phe+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 90+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 95+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 100 ?

!+0

!GGC+10 TGT+10 AAA+10 GTG+10 ACC+10 GAG+10 TAC+10 ACG+10 TTC+10 TCC+10 GC

#C+10 TCG+10 AAC+10 AGA+10 CTA+10 ACC+10 +10 +10 +10 10230 ?

!Gly+10 Cys+10 Lys+10 Val+10 Thr+10 Glu+10 Tyr+10 Thr+10 Phe+10 Ser+10 Al

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#a+10 Ser+10 Asn+10 Arg+10 Leu+10 Thr ?

!+10 +10 +10 +10 105+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 110+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 115 ?

!+0

!GGA+10 CCT+10 CCA+10 CAC+10 CCG+10 TTT+10 AAG+10 CTC+10 ACT+10 ATA+10 CG

#A+10 AAT+10 CCT+10 CGT+10 CCG+10 AAC+10 +10 +10 +10 10278 ?

!Gly+10 Pro+10 Pro+10 His+10 Pro+10 Phe+10 Lys+10 Leu+10 Thr+10 Ile+10 Ar

#g+10 Asn+10 Pro+10 Arg+10 Pro+10 Asn ?

!120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#25+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#35 ?

!+0

!GAC+10 AGC+10 GGG+10 ATG+10 TTC+10 TAC+10 GTA+10 ATT+10 GTT+10 CGG+10 CT

#A+10 GAC+10 GAC+10 ACC+10 AAA+10 GAA+10 +10 +10 +10 10326 ?

!Asp+10 Ser+10 Gly+10 Met+10 Phe+10 Tyr+10 Val+10 Ile+10 Val+10 Arg+10 Le

#u+10 Asp+10 Asp+10 Thr+10 Lys+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 140+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 145+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 150 ?

!+0

!CCC+10 ATT+10 GAC+10 GTC+10 TTC+10 GCG+10 ATC+10 CAA+10 CTA+10 TCG+10 GT

#G+10 TAT+10 CAA+10 TTC+10 GCG+10 AAC+10 +10 +10 +10 10374 ?

!Pro+10 Ile+10 Asp+10 Val+10 Phe+10 Ala+10 Ile+10 Gln+10 Leu+10 Ser+10 Va

#l+10 Tyr+10 Gln+10 Phe+10 Ala+10 Asn ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 155+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 160+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165 ?

!+0

!ACC+10 GCC+10 GCG+10 ACT+10 CGC+10 GGA+10 CTC+10 TAT+10 TCC+10 AAG+10 GC

#T+10 TCG+10 TGT+10 CGC+10 ACC+10 TTC+10 +10 +10 +10 10422 ?

!Thr+10 Ala+10 Ala+10 Thr+10 Arg+10 Gly+10 Leu+10 Tyr+10 Ser+10 Lys+10 Al

#a+10 Ser+10 Cys+10 Arg+10 Thr+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 170+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 175+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 180 ?

!+0

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PM

!GGA+10 TTA+10 CCT+10 ACC+10 GTC+10 CAA+10 CTT+10 GAG+10 GCC+10 TAT+10 CT  
#C+10 AGG+10 ACC+10 GAG+10 GAA+10 AGT+10 +10 +10 +10 10470 ?  
!Gly+10 Leu+10 Pro+10 Thr+10 Val+10 Gln+10 Leu+10 Glu+10 Ala+10 Tyr+10 Le  
#u+10 Arg+10 Thr+10 Glu+10 Glu+10 Ser ?  
!+10 +10 +10 +10 185+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 190+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 195 ?  
!+0  
!TGG+10 CGC+10 AAC+10 TGG+10 CAA+10 GCG+10 TAC+10 GTT+10 GCC+10 ACG+10 GA  
#G+10 GCC+10 ACG+10 ACG+10 ACC+10 AGC+10 +10 +10 +10 10518 ?  
!Trp+10 Arg+10 Asn+10 Trp+10 Gln+10 Ala+10 Tyr+10 Val+10 Ala+10 Thr+10 Gl  
#u+10 Ala+10 Thr+10 Thr+10 Thr+10 Ser ?  
!200+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#05+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#15 ?  
!+0  
!GCC+10 GAG+10 GCG+10 ACA+10 ACC+10 CCG+10 ACG+10 CCC+10 GTC+10 ACT+10 GC  
#A+10 ACC+10 AGC+10 GCC+10 TCC+10 GAA+10 +10 +10 +10 10566 ?  
!Ala+10 Glu+10 Ala+10 Thr+10 Thr+10 Pro+10 Thr+10 Pro+10 Val+10 Thr+10 Al  
#a+10 Thr+10 Ser+10 Ala+10 Ser+10 Glu ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 220+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 225+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 230 ?  
!+0  
!CTT+10 GAA+10 GCG+10 GAA+10 CAC+10 TTT+10 ACC+10 TTT+10 CCC+10 TGG+10 CT  
#A+10 GAA+10 AAT+10 GGC+10 GTG+10 GAT+10 +10 +10 +10 10614 ?  
!Leu+10 Glu+10 Ala+10 Glu+10 His+10 Phe+10 Thr+10 Phe+10 Pro+10 Trp+10 Le  
#u+10 Glu+10 Asn+10 Gly+10 Val+10 Asp ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 235+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 240+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245 ?  
!+0  
!CAT+10 TAC+10 GAA+10 CCG+10 ACA+10 CCC+10 GCA+10 AAC+10 GAA+10 AAT+10 TC  
#A+10 AAC+10 GTT+10 ACT+10 GTC+10 CGT+10 +10 +10 +10 10662 ?  
!His+10 Tyr+10 Glu+10 Pro+10 Thr+10 Pro+10 Ala+10 Asn+10 Glu+10 Asn+10 Se  
#r+10 Asn+10 Val+10 Thr+10 Val+10 Arg ?  
!+10 +10 +10 +10 +10 +10 +10 +10 250+10 +10 +10 +10 +10 +10 +10 +10 +10

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PM

#+10 +10 +10 +10 +10 +10 +10 255+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 260 ?

!+0

!CTC+10 GGG+10 ACA+10 ATG+10 AGC+10 CCT+10 ACG+10 CTA+10 ATT+10 GGG+10 GT

#A+10 ACC+10 GTG+10 GCT+10 GCC+10 GTC+10 +10 +10 +10 10710 ?

!Leu+10 Gly+10 Thr+10 Met+10 Ser+10 Pro+10 Thr+10 Leu+10 Ile+10 Gly+10 Va

#l+10 Thr+10 Val+10 Ala+10 Ala+10 Val ?

!+10 +10 +10 +10 265+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 270+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 275 ?

!+0

!GTG+10 AGC+10 GCA+10 ACG+10 ATC+10 GGC+10 CTC+10 GTC+10 ATT+10 GTA+10 AT

#T+10 TCC+10 ATC+10 GTC+10 ACC+10 AGA+10 +10 +10 +10 10758 ?

!Val+10 Ser+10 Ala+10 Thr+10 Ile+10 Gly+10 Leu+10 Val+10 Ile+10 Val+10 Il

#e+10 Ser+10 Ile+10 Val+10 Thr+10 Arg ?

!280+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#85+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#95 ?

!+0

!AAC+10 ATG+10 TGC+10 ACC+10 CCG+10 CAC+10 CGA+10 AAA+10 TTA+10 GAC+10 AC

#G+10 GTC+10 TCG+10 CAA+10 GAC+10 GAC+10 +10 +10 +10 10806 ?

!Asn+10 Met+10 Cys+10 Thr+10 Pro+10 His+10 Arg+10 Lys+10 Leu+10 Asp+10 Th

#r+10 Val+10 Ser+10 Gln+10 Asp+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 300+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 305+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 310 ?

!+0

!GAA+10 GAA+10 CGT+10 TCC+10 CAA+10 ACT+10 AGA+10 AGG+10 GAA+10 TCG+10 CG

#A+10 AAA+10 TTT+10 GGA+10 CCC+10 ATG+10 +10 +10 +10 10854 ?

!Glu+10 Glu+10 Arg+10 Ser+10 Gln+10 Thr+10 Arg+10 Arg+10 Glu+10 Ser+10 Ar

#g+10 Lys+10 Phe+10 Gly+10 Pro+10 Met ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 315+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 320+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325 ?

!+0

!GTT+10 GCG+10 TGC+10 GAA+10 ATA+10 AAC+10 AAG+10 GGC+10 GCT+10 GAC+10 CA

#G+10 GAT+10 AGT+10 GAA+10 CTT+10 GTG+10 +10 +10 +10 10902 ?

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PM

!Val+10 Ala+10 Cys+10 Glu+10 Ile+10 Asn+10 Lys+10 Gly+10 Ala+10 Asp+10 Gl

#n+10 Asp+10 Ser+10 Glu+10 Leu+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 330+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 335+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 340 ?

!+0

!GAA+10 CTG+10 GTT+10 GCG+10 ATT+10 GTT+10 AAC+10 CCG+10 TCT+10 GCG+10 CT

#A+10 AGC+10 TCG+10 CCC+10 GAC+10 TCA+10 +10 +10 +10 10950 ?

!Glu+10 Leu+10 Val+10 Ala+10 Ile+10 Val+10 Asn+10 Pro+10 Ser+10 Ala+10 Le

#u+10 Ser+10 Ser+10 Pro+10 Asp+10 Ser ?

!+10 +10 +10 +10 345+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 350+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 355 ?

!+0

!ATA+10 AAA+10 ATG+10 TGATTAAGTC+10 TGAATGTGGC+10 TCTCCAATCA+10 TTTCGATTC

#T+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10999 ?

!Ile+10 Lys+10 Met ?

!360 ?

!+0

!CTAATCTCCC+10 AATCCTCTCA+10 AAAGGGGCAG+10 TATCGGACAC+10 GGACTGGGAG+10 GG

#GCGTACTA+10 +10 11059 ?

!+0

!CACGATAGTT+10 ATATGGTACA+10 GCAGAGGCCT+10 CTGAACACTT+10 AGGAGGAGAA+10 TT

#CAGCCGGG+10 +10 11119 ?

!+0

!GAGAGCCCCT+10 GTTGAGTAGG+10 CTTGGGAGCA+10 TATTGCAGG+10 ATG+10 AAC+10 ATG

#+10 TTA+10 GTG+10 +10 +10 +10 +10 11173 ?

!+0

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 Met+10 Asn+10 Met+10 Leu+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 1+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 5 ?

!+0

!ATA+10 GTT+10 CTC+10 GCC+10 TCT+10 TGT+10 CTT+10 GCG+10 CGC+10 CTA+10 AC

#T+10 TTT+10 GCG+10 ACG+10 CGA+10 CAC+10 +10 +10 +10 11221 ?

[illegible]



!+0

!GCG+10 GGA+10 CCC+10 CTG+10 TCT+10 GCA+10 AAC+10 CTG+10 GTA+10 ATT+10 TT

#A+10 CTA+10 AAG+10 CGC+10 GGC+10 GAA+10 +10 +10 +10 11461 ?

!Ala+10 Gly+10 Pro+10 Leu+10 Ser+10 Ala+10 Asn+10 Leu+10 Val+10 Ile+10 Le

#u+10 Leu+10 Lys+10 Arg+10 Gly+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100 ?

!+0

!AGC+10 TTC+10 GTC+10 GTG+10 CTG+10 GGT+10 TCT+10 GGG+10 CTA+10 CAC+10 AA

#C+10 AGC+10 AAT+10 ATA+10 ACT+10 AAT+10 +10 +10 +10 11509 ?

!Ser+10 Phe+10 Val+10 Val+10 Leu+10 Gly+10 Ser+10 Gly+10 Leu+10 His+10 As

#n+10 Ser+10 Asn+10 Ile+10 Thr+10 Asn ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 115 ?

!+0

!ATC+10 ATG+10 TGG+10 ACA+10 GAG+10 TAC+10 GGA+10 GGC+10 CTG+10 CTC+10 TT

#T+10 GAT+10 CCT+10 GTA+10 ACT+10 CGT+10 +10 +10 +10 11557 ?

!Ile+10 Met+10 Trp+10 Thr+10 Glu+10 Tyr+10 Gly+10 Gly+10 Leu+10 Leu+10 Ph

#e+10 Asp+10 Pro+10 Val+10 Thr+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 130 ?

!+0

!TCG+10 GAC+10 GAG+10 GGA+10 ATC+10 TAT+10 TTT+10 CGA+10 CGG+10 ATC+10 TC

#T+10 CAG+10 CCA+10 GAT+10 CTG+10 GCC+10 +10 +10 +10 11605 ?

!Ser+10 Asp+10 Glu+10 Gly+10 Ile+10 Tyr+10 Phe+10 Arg+10 Arg+10 Ile+10 Se

#r+10 Gln+10 Pro+10 Asp+10 Leu+10 Ala ?

!+10 +10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 145 ?

!+0

!ATG+10 GAA+10 ACT+10 ACA+10 TCG+10 TAC+10 AAC+10 GTC+10 AGC+10 GTT+10 CT

#T+10 TCG+10 CAC+10 GTA+10 GAC+10 GAG+10 +10 +10 +10 11653 ?

!Met+10 Glu+10 Thr+10 Thr+10 Ser+10 Tyr+10 Asn+10 Val+10 Ser+10 Val+10 Le

#u+10 Ser+10 His+10 Val+10 Asp+10 Glu ?

!150+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

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118 PM

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1  
#60+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1  
#65 ?  
!+0  
!AAG+10 GCT+10 CCA+10 GCA+10 CCG+10 CAC+10 GAG+10 GTG+10 GAG+10 ATA+10 GA  
#C+10 ACC+10 ATC+10 AAG+10 CCG+10 TCA+10 +10 +10 +10 11701 ?  
!Lys+10 Ala+10 Pro+10 Ala+10 Pro+10 His+10 Glu+10 Val+10 Glu+10 Ile+10 As  
#p+10 Thr+10 Ile+10 Lys+10 Pro+10 Ser ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180 ?  
!+0  
!GAG+10 GCC+10 CAC+10 GCG+10 CAC+10 GTG+10 GAA+10 TTA+10 CAA+10 ATG+10 CT  
#G+10 CCG+10 TTT+10 CAT+10 GAA+10 CTC+10 +10 +10 +10 11749 ?  
!Glu+10 Ala+10 His+10 Ala+10 His+10 Val+10 Glu+10 Leu+10 Gln+10 Met+10 Le  
#u+10 Pro+10 Phe+10 His+10 Glu+10 Leu ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 195 ?  
!+0  
!AAC+10 GAC+10 AAC+10 AGC+10 CCC+10 ACC+10 TAT+10 GTG+10 ACC+10 CCT+10 GT  
#T+10 CTT+10 AGA+10 GTC+10 TTC+10 CCA+10 +10 +10 +10 11797 ?  
!Asn+10 Asp+10 Asn+10 Ser+10 Pro+10 Thr+10 Tyr+10 Val+10 Thr+10 Pro+10 Va  
#l+10 Leu+10 Arg+10 Val+10 Phe+10 Pro ?  
!+10 +10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 205+10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 210 ?  
!+0  
!CCG+10 ACC+10 GAG+10 CAC+10 GTA+10 AAA+10 TTT+10 AAC+10 GTT+10 ACG+10 TA  
#T+10 TCG+10 TGG+10 TAT+10 GGG+10 TTT+10 +10 +10 +10 11845 ?  
!Pro+10 Thr+10 Glu+10 His+10 Val+10 Lys+10 Phe+10 Asn+10 Val+10 Thr+10 Ty  
#r+10 Ser+10 Trp+10 Tyr+10 Gly+10 Phe ?  
!+10 +10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 220+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 225 ?  
!+0  
!GAT+10 GTC+10 AAA+10 GAG+10 GAG+10 TGC+10 GAA+10 GAA+10 GTG+10 AAA+10 CT  
#G+10 TTC+10 GAG+10 CCG+10 TGC+10 GTA+10 +10 +10 +10 11893 ?

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PM

!Asp+10 Val+10 Lys+10 Glu+10 Glu+10 Cys+10 Glu+10 Glu+10 Val+10 Lys+10 Le

#u+10 Phe+10 Glu+10 Pro+10 Cys+10 Val ?

!230+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#45 ?

!+0

!TAC+10 CAT+10 CCT+10 ACA+10 GAC+10 GGC+10 AAA+10 TGT+10 CAG+10 TTT+10 CC

#C+10 GCA+10 ACC+10 AAC+10 CAG+10 AGA+10 +10 +10 +10 11941 ?

!Tyr+10 His+10 Pro+10 Thr+10 Asp+10 Gly+10 Lys+10 Cys+10 Gln+10 Phe+10 Pr

#o+10 Ala+10 Thr+10 Asn+10 Gln+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260 ?

!+0

!TGC+10 CTC+10 ATA+10 GGA+10 TCT+10 GTC+10 TTG+10 ATG+10 GCG+10 GAA+10 TT

#C+10 TTG+10 GGC+10 GCG+10 GCC+10 TCT+10 +10 +10 +10 11989 ?

!Cys+10 Leu+10 Ile+10 Gly+10 Ser+10 Val+10 Leu+10 Met+10 Ala+10 Glu+10 Ph

#e+10 Leu+10 Gly+10 Ala+10 Ala+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 275 ?

!+0

!TTG+10 CTG+10 GAT+10 TGT+10 TCC+10 CGC+10 GAT+10 ACT+10 CTA+10 GAA+10 GA

#C+10 TGC+10 CAC+10 GAA+10 AAT+10 CGC+10 +10 +10 +10 12037 ?

!Leu+10 Leu+10 Asp+10 Cys+10 Ser+10 Arg+10 Asp+10 Thr+10 Leu+10 Glu+10 As

#p+10 Cys+10 His+10 Glu+10 Asn+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 290 ?

!+0

!GTG+10 CCG+10 AAC+10 CTA+10 CGG+10 TTC+10 GAT+10 TCG+10 CGA+10 CTC+10 TC

#C+10 GAG+10 TCA+10 CGC+10 GCA+10 GGC+10 +10 +10 +10 12085 ?

!Val+10 Pro+10 Asn+10 Leu+10 Arg+10 Phe+10 Asp+10 Ser+10 Arg+10 Leu+10 Se

#r+10 Glu+10 Ser+10 Arg+10 Ala+10 Gly ?

!+10 +10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 300+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 305 ?

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120 PM

!+0

!CTG+10 GTG+10 ATC+10 AGT+10 CCT+10 CTT+10 ATA+10 GCC+10 ATC+10 CCC+10 AA

#A+10 GTT+10 TTG+10 ATT+10 ATA+10 GTC+10 +10 +10 +10 12133 ?

!Leu+10 Val+10 Ile+10 Ser+10 Pro+10 Leu+10 Ile+10 Ala+10 Ile+10 Pro+10 Ly

#s+10 Val+10 Leu+10 Ile+10 Ile+10 Val ?

!310+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#20+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#25 ?

!+0

!GTT+10 TCC+10 GAC+10 GGA+10 GAC+10 ATT+10 TTG+10 GGA+10 TGG+10 AGC+10 TA

#C+10 ACG+10 GTG+10 CTC+10 GGG+10 AAA+10 +10 +10 +10 12181 ?

!Val+10 Ser+10 Asp+10 Gly+10 Asp+10 Ile+10 Leu+10 Gly+10 Trp+10 Ser+10 Ty

#r+10 Thr+10 Val+10 Leu+10 Gly+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340 ?

!+0

!CGT+10 AAC+10 AGT+10 CCG+10 CGC+10 GTA+10 GTA+10 GTC+10 GAA+10 ACG+10 CA

#C+10 ATG+10 CCC+10 TCG+10 AAG+10 GTC+10 +10 +10 +10 12229 ?

!Arg+10 Asn+10 Ser+10 Pro+10 Arg+10 Val+10 Val+10 Val+10 Glu+10 Thr+10 Hi

#s+10 Met+10 Pro+10 Ser+10 Lys+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 355 ?

!+0

!CCG+10 ATG+10 AAC+10 AAA+10 GTA+10 GTA+10 ATT+10 GGC+10 AGT+10 CCC+10 GG

#A+10 CCA+10 ATG+10 GAC+10 GAA+10 ACG+10 +10 +10 +10 12277 ?

!Pro+10 Met+10 Asn+10 Lys+10 Val+10 Val+10 Ile+10 Gly+10 Ser+10 Pro+10 Gl

#y+10 Pro+10 Met+10 Asp+10 Glu+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 365+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 370 ?

!+0

!GGT+10 AAC+10 TAT+10 AAA+10 ATG+10 TAC+10 TTC+10 GTC+10 GTC+10 GCG+10 GG

#G+10 GTG+10 GCC+10 GCG+10 ACG+10 TGC+10 +10 +10 +10 12325 ?

!Gly+10 Asn+10 Tyr+10 Lys+10 Met+10 Tyr+10 Phe+10 Val+10 Val+10 Ala+10 Gl

#y+10 Val+10 Ala+10 Ala+10 Thr+10 Cys ?

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121

PM

!+10 +10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 380+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 385 ?

!+0

!GTA+10 ATT+10 CTT+10 ACA+10 TGC+10 GCT+10 CTG+10 CTT+10 GTG+10 GGG+10 AA

#A+10 AAG+10 AAG+10 TGC+10 CCC+10 GCG+10 +10 +10 +10 12373 ?

!Val+10 Ile+10 Leu+10 Thr+10 Cys+10 Ala+10 Leu+10 Leu+10 Val+10 Gly+10 Ly

#s+10 Lys+10 Lys+10 Cys+10 Pro+10 Ala ?

!390+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#00+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#05 ?

!+0

!CAC+10 CAA+10 ATG+10 GGT+10 ACT+10 TTT+10 TCC+10 AAG+10 ACC+10 GAA+10 CC

#A+10 TTG+10 TAC+10 GCG+10 CCG+10 CTC+10 +10 +10 +10 12421 ?

!His+10 Gln+10 Met+10 Gly+10 Thr+10 Phe+10 Ser+10 Lys+10 Thr+10 Glu+10 Pr

#o+10 Leu+10 Tyr+10 Ala+10 Pro+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420 ?

!+0

!CCC+10 AAA+10 AAC+10 GAG+10 TTT+10 GAG+10 GCC+10 GGC+10 GGG+10 CTT+10 AC

#G+10 GAC+10 GAT+10 GAG+10 GAA+10 GTG+10 +10 +10 +10 12469 ?

!Pro+10 Lys+10 Asn+10 Glu+10 Phe+10 Glu+10 Ala+10 Gly+10 Gly+10 Leu+10 Th

#r+10 Asp+10 Asp+10 Glu+10 Glu+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 435 ?

!+0

!ATT+10 TAT+10 GAC+10 GAA+10 GTA+10 TAC+10 GAA+10 CCC+10 CTA+10 TTT+10 CG

#C+10 GGC+10 TAC+10 TGT+10 AAG+10 CAG+10 +10 +10 +10 12517 ?

!Ile+10 Tyr+10 Asp+10 Glu+10 Val+10 Tyr+10 Glu+10 Pro+10 Leu+10 Phe+10 Ar

#g+10 Gly+10 Tyr+10 Cys+10 Lys+10 Gln ?

!+10 +10 +10 +10 +10 +10 +10 +10 440+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 445+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 450 ?

!+0

!GAA+10 TTC+10 CGC+10 GAA+10 GAT+10 GTG+10 AAT+10 ACC+10 TTT+10 TTC+10 GG

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PM

#T+10 GCG+10 GTC+10 GTG+10 GAG+10 GGA+10 +10 +10 +10 12565 ?

!Glu+10 Phe+10 Arg+10 Glu+10 Asp+10 Val+10 Asn+10 Thr+10 Phe+10 Phe+10 Gl

#y+10 Ala+10 Val+10 Val+10 Glu+10 Gly ?

!+10 +10 +10 +10 455+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 460+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 465 ?

!+0

!GAA+10 AGG+10 GCC+10 TTA+10 AAC+10 TTT+10 AAA+10 TCC+10 GCC+10 ATC+10 GC

#A+10 TCA+10 ATG+10 GCA+10 GAT+10 CGC+10 +10 +10 +10 12613 ?

!Glu+10 Arg+10 Ala+10 Leu+10 Asn+10 Phe+10 Lys+10 Ser+10 Ala+10 Ile+10 Al

#a+10 Ser+10 Met+10 Ala+10 Asp+10 Arg ?

!470+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#80+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#85 ?

!+0

!ATC+10 CTG+10 GCA+10 AAT+10 AAA+10 AGC+10 GGC+10 AGA+10 AGG+10 AAT+10 AT

#G+10 GAT+10 AGC+10 TAT+10 TAGTTGGTC+10 +10 12664 ?

!Ile+10 Leu+10 Ala+10 Asn+10 Lys+10 Ser+10 Gly+10 Arg+10 Arg+10 Asn+10 Me

#t+10 Asp+10 Ser+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 490+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 495+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 500 ?

!+0

!ATG+10 CCT+10 TTT+10 AAG+10 ACC+10 AGA+10 GGG+10 GCC+10 GAA+10 GAC+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 12694 ?

!Met+10 Pro+10 Phe+10 Lys+10 Thr+10 Arg+10 Gly+10 Ala+10 Glu+10 Asp ?

!+10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10 ?

!+0

!GCG+10 GCC+10 GCG+10 GGC+10 AAG+10 AAC+10 AGG+10 TTT+10 AAG+10 AAA+10 TC

#G+10 AGA+10 AAT+10 CGG+10 GAA+10 ATC+10 +10 +10 +10 12742 ?

!Ala+10 Ala+10 Ala+10 Gly+10 Lys+10 Asn+10 Arg+10 Phe+10 Lys+10 Lys+10 Se

#r+10 Arg+10 Asn+10 Arg+10 Glu+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25 ?

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PM

!+0

!TTA+10 CCG+10 ACC+10 AGA+10 CTG+10 CGT+10 GGC+10 ACC+10 GGT+10 AAG+10 AA

#A+10 ACT+10 GCC+10 GGA+10 TTG+10 TCC+10 +10 +10 +10 12790 ?

!Leu+10 Pro+10 Thr+10 Arg+10 Leu+10 Arg+10 Gly+10 Thr+10 Gly+10 Lys+10 Ly

#s+10 Thr+10 Ala+10 Gly+10 Leu+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 40 ?

!+0

!AAT+10 TAT+10 ACC+10 CAG+10 CCT+10 ATT+10 CCC+10 TGG+10 AAC+10 CCT+10 AA

#A+10 TTC+10 TGC+10 AGC+10 GCG+10 CGC+10 +10 +10 +10 12838 ?

!Asn+10 Tyr+10 Thr+10 Gln+10 Pro+10 Ile+10 Pro+10 Trp+10 Asn+10 Pro+10 Ly

#s+10 Phe+10 Cys+10 Ser+10 Ala+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 45+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 55 ?

!+0

!GGG+10 GAA+10 TCT+10 GAC+10 AAC+10 CAC+10 GCG+10 TGT+10 AAA+10 GAC+10 AC

#T+10 TTT+10 TAT+10 CGC+10 AGG+10 ACG+10 +10 +10 +10 12886 ?

!Gly+10 Glu+10 Ser+10 Asp+10 Asn+10 His+10 Ala+10 Cys+10 Lys+10 Asp+10 Th

#r+10 Phe+10 Tyr+10 Arg+10 Arg+10 Thr ?

!+10 +10 +10 +10 +10 60+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 70 ?

!+0

!TGC+10 TGC+10 GCA+10 TCG+10 CGC+10 TCT+10 ACC+10 GTT+10 TCC+10 AGT+10 CA

#A+10 CCC+10 GAT+10 TCC+10 CCC+10 CAC+10 +10 +10 +10 12934 ?

!Cys+10 Cys+10 Ala+10 Ser+10 Arg+10 Ser+10 Thr+10 Val+10 Ser+10 Ser+10 Gl

#n+10 Pro+10 Asp+10 Ser+10 Pro+10 His ?

!+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 85+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 90 ?

!+0

!ACA+10 CCC+10 ATG+10 CCT+10 ACT+10 GAG+10 TAT+10 GGG+10 CGC+10 GTG+10 CC

#C+10 TCC+10 GCA+10 AAG+10 CGC+10 AAA+10 +10 +10 +10 12982 ?

!Thr+10 Pro+10 Met+10 Pro+10 Thr+10 Glu+10 Tyr+10 Gly+10 Arg+10 Val+10 Pr

#o+10 Ser+10 Ala+10 Lys+10 Arg+10 Lys ?

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PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105 ?

!+0

!AAA+10 CTA+10 TCA+10 TCT+10 TCA+10 GAC+10 TSS+10 GAG+10 GGC+10 GCG+10 CA

#C+10 CAA+10 CCC+10 CTA+10 GTA+10 TCC+10 +10 +10 +10 13030 ?

!Lys+10 Leu+10 Ser+10 Ser+10 Ser+10 Asp+10 Xaa+10 Glu+10 Gly+10 Ala+10 Hi

#s+10 Gln+10 Pro+10 Leu+10 Val+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 120 ?

!+0

!TGT+10 AAA+10 CTT+10 CCG+10 GAT+10 TCT+10 CAA+10 GCA+10 GCA+10 CCG+10 GC

#G+10 CGA+10 ACC+10 TAT+10 AGT+10 TCT+10 +10 +10 +10 13078 ?

!Cys+10 Lys+10 Leu+10 Pro+10 Asp+10 Ser+10 Gln+10 Ala+10 Ala+10 Pro+10 Al

#a+10 Arg+10 Thr+10 Tyr+10 Ser+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 125+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 135 ?

!+0

!GCG+10 CAA+10 AGA+10 TAT+10 ACT+10 GTT+10 GAC+10 GAG+10 GTT+10 TCG+10 TC

#G+10 CCA+10 ACT+10 CCG+10 CCA+10 GGC+10 +10 +10 +10 13126 ?

!Ala+10 Gln+10 Arg+10 Tyr+10 Thr+10 Val+10 Asp+10 Glu+10 Val+10 Ser+10 Se

#r+10 Pro+10 Thr+10 Pro+10 Pro+10 Gly ?

!+10 +10 +10 +10 140+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 150 ?

!+0

!GTC+10 GAC+10 GCT+10 GTT+10 GCG+10 GAC+10 TTA+10 GAA+10 ACG+10 CGC+10 GC

#G+10 GAA+10 CTT+10 CCT+10 GGC+10 GCT+10 +10 +10 +10 13174 ?

!Val+10 Asp+10 Ala+10 Val+10 Ala+10 Asp+10 Leu+10 Glu+10 Thr+10 Arg+10 Al

#a+10 Glu+10 Leu+10 Pro+10 Gly+10 Ala ?

!155+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#70 ?

!+0

!ACG+10 ACG+10 GAA+10 CAA+10 ACG+10 GAA+10 AGT+10 AAA+10 AAT+10 AAG+10 CT





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#50 ?

!+0

!GCG+10 GCG+10 AGG+10 GCC+10 TTG+10 CAG+10 AAA+10 CAA+10 GGG+10 CGG+10 TA

#G+10 CAGTAATAATA+10 ACCACACAA+10 +10 13467 ?

!Ala+10 Ala+10 Arg+10 Ala+10 Leu+10 Gln+10 Lys+10 Gln+10 Gly+10 Arg+10 +10

#\* ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260 ?

!+0

!ATATTG+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 13473 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:2: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 476+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:2: ?

!+0

!Met+10 Arg+10 Phe+10 Arg+10 Arg+10 Ile+10 Cys+10 Ser+10 Arg+10 Ser+10 Ar

#g+10 Ala+10 Glu+10 Lys+10 Arg+10 Arg ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Arg+10 Thr+10 Thr+10 Glu+10 Asn+10 Pro+10 Leu+10 Thr+10 Ser+10 Lys+10 Ar

#g+10 Val+10 Cys+10 Val+10 Leu+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Ser+10 Phe+10 Ser+10 Arg+10 Thr+10 Met+10 Ser+10 Leu+10 Arg+10 Pro+10 Ty  
#r+10 Ala+10 Glu+10 Ile+10 Leu+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Thr+10 Ala+10 Glu+10 Gly+10 Val+10 Glu+10 Arg+10 Leu+10 Ala+10 Glu+10 Le  
#u+10 Val+10 Ser+10 Val+10 Thr+10 Met ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 60 ?

!+0

!Thr+10 Glu+10 Arg+10 Ala+10 Glu+10 Pro+10 Val+10 Thr+10 Glu+10 Asn+10 Th  
#r+10 Ala+10 Val+10 Asn+10 Ser+10 Ile ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 80 ?

!+0

!Pro+10 Pro+10 Ala+10 Asn+10 Glu+10 Asn+10 Gly+10 Gln+10 Asn+10 Phe+10 Al  
#a+10 Tyr+10 Ala+10 Gly+10 Asp+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Pro+10 Ser+10 Thr+10 Thr+10 Glu+10 Lys+10 Val+10 Asp+10 Gly+10 Ser+10 Hi  
#s+10 Thr+10 Asp+10 Phe+10 Asp+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Ala+10 Ser+10 Ser+10 Asp+10 Tyr+10 Ala+10 Gly+10 Pro+10 Val+10 Pro+10 Le  
#u+10 Ala+10 Gln+10 Thr+10 Arg+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

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PM

!Lys+10 His+10 Ser+10 Asp+10 Glu+10 Phe+10 Leu+10 Gln+10 His+10 Phe+10 Ar

#g+10 Val+10 Leu+10 Asp+10 Asp+10 Leu ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Val+10 Glu+10 Gly+10 Ala+10 Tyr+10 Gly+10 Phe+10 Ile+10 Cys+10 Gly+10 Va

#l+10 Arg+10 Arg+10 Tyr+10 Thr+10 Glu ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Glu+10 Glu+10 Gln+10 Arg+10 Arg+10 Arg+10 Gly+10 Val+10 Asn+10 Ser+10 Th

#r+10 Asn+10 Gln+10 Gly+10 Lys+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Lys+10 Cys+10 Lys+10 Arg+10 Leu+10 Ile+10 Ala+10 Lys+10 Tyr+10 Val+10 Ly

#s+10 Asn+10 Gly+10 Thr+10 Arg+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Ala+10 Ser+10 Gln+10 Leu+10 Glu+10 Asn+10 Glu+10 Ile+10 Leu+10 Val+10 Le

#u+10 Gly+10 Arg+10 Leu+10 Asn+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Glu+10 Asn+10 Val+10 Leu+10 Lys+10 Ile+10 Gln+10 Glu+10 Ile+10 Leu+10 Ar

#g+10 Tyr+10 Pro+10 Asp+10 Asn+10 Thr ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Tyr+10 Met+10 Leu+10 Thr+10 Gln+10 Arg+10 Tyr+10 Gln+10 Phe+10 Asp+10 Le

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

129

PM

#u+10 Tyr+10 Ser+10 Tyr+10 Met+10 Tyr ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Asp+10 Glu+10 Ala+10 Phe+10 Asp+10 Trp+10 Lys+10 Asp+10 Ser+10 Pro+10 Me

#t+10 Leu+10 Lys+10 Gln+10 Thr+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Arg+10 Ile+10 Met+10 Lys+10 Gln+10 Leu+10 Met+10 Ser+10 Ala+10 Val+10 Se

#r+10 Tyr+10 Ile+10 His+10 Ser+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Lys+10 Leu+10 Ile+10 His+10 Arg+10 Asp+10 Ile+10 Lys+10 Leu+10 Glu+10 As

#n+10 Ile+10 Phe+10 Leu+10 Asn+10 Cys ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Asp+10 Gly+10 Lys+10 Thr+10 Val+10 Leu+10 Gly+10 Asp+10 Phe+10 Gly+10 Th

#r+10 Val+10 Thr+10 Pro+10 Phe+10 Glu ?

!+10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 300 ?

!+0

!Asn+10 Glu+10 Arg+10 Glu+10 Pro+10 Phe+10 Glu+10 Tyr+10 Gly+10 Trp+10 Va

#l+10 Gly+10 Thr+10 Val+10 Ala+10 Thr ?

!305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#20 ?

!+0

!Asn+10 Ser+10 Pro+10 Glu+10 Ile+10 Leu+10 Ala+10 Arg+10 Asp+10 Ser+10 Ty

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130

PM

#r+10 Cys+10 Glu+10 Ile+10 Thr+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335 ?

!+0

!Ile+10 Trp+10 Ser+10 Cys+10 Gly+10 Val+10 Val+10 Leu+10 Leu+10 Glu+10 Me

#t+10 Val+10 Ser+10 His+10 Glu+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?

!+0

!Cys+10 Pro+10 Ile+10 Gly+10 Asp+10 Gly+10 Gly+10 Gly+10 Asn+10 Pro+10 Hi

#s+10 Gln+10 Gln+10 Leu+10 Leu+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 365 ?

!+0

!Val+10 Ile+10 Asp+10 Ser+10 Leu+10 Ser+10 Val+10 Cys+10 Asp+10 Glu+10 Gl

#u+10 Phe+10 Pro+10 Asp+10 Pro+10 Pro ?

!+10 +10 +10 +10 370+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 380 ?

!+0

!Cys+10 Asn+10 Leu+10 Tyr+10 Asn+10 Tyr+10 Leu+10 His+10 Tyr+10 Ala+10 Se

#r+10 Ile+10 Asp+10 Arg+10 Ala+10 Gly ?

!385+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#00 ?

!+0

!His+10 Thr+10 Val+10 Pro+10 Ser+10 Leu+10 Ile+10 Arg+10 Asn+10 Leu+10 Hi

#s+10 Leu+10 Pro+10 Ala+10 Asp+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 405+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415 ?

!+0

!Glu+10 Tyr+10 Pro+10 Leu+10 Val+10 Lys+10 Met+10 Leu+10 Thr+10 Phe+10 As

#p+10 Trp+10 Arg+10 Leu+10 Arg+10 Pro ?

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PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430 ?

!+0

!Ser+10 Ala+10 Ala+10 Glu+10 Val+10 Leu+10 Ala+10 Met+10 Pro+10 Leu+10 Ph

#e+10 Ser+10 Ala+10 Glu+10 Glu+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 435+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 440+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 445 ?

!+0

!Arg+10 Thr+10 Ile+10 Thr+10 Ile+10 Ile+10 His+10 Gly+10 Lys+10 His+10 Ly

#s+10 Pro+10 Ile+10 Arg+10 Pro+10 Glu ?

!+10 +10 +10 +10 450+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 455+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 460 ?

!+0

!Ile+10 Arg+10 Ala+10 Arg+10 Val+10 Pro+10 Arg+10 Ser+10 Met+10 Ser+10 Gl

#u+10 Gly ?

!465+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#75 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:3: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 510+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:3: ?

!+0

!Met+10 Thr+10 Leu+10 Pro+10 His+10 Arg+10 Leu+10 Thr+10 Lys+10 Arg+10 Pr

#o+10 Phe+10 Ala+10 Arg+10 Arg+10 Phe ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +15 ?

!+0

!Cys+10 Ser+10 Val+10 Phe+10 Val+10 Ile+10 His+10 Tyr+10 Ser+10 Glu+10 Th

#r+10 Lys+10 Leu+10 Asp+10 Arg+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

!+0

!Asn+10 Lys+10 Thr+10 Met+10 Leu+10 Leu+10 Tyr+10 Arg+10 Pro+10 Asp+10 Se

#r+10 Thr+10 Met+10 Arg+10 His+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

!+0

!Gly+10 Gly+10 Asp+10 Ala+10 Asn+10 His+10 Arg+10 Gly+10 Ile+10 Arg+10 Pr

#o+10 Arg+10 Arg+10 Lys+10 Ser+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

!+0

!Gly+10 Ala+10 Phe+10 Ser+10 Ala+10 Arg+10 Glu+10 Lys+10 Thr+10 Gly+10 Ly

#s+10 Arg+10 Asn+10 Ala+10 Leu+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Glu+10 Ser+10 Ser+10 Ser+10 Ser+10 Ser+10 Asp+10 Met+10 Leu+10 Asp+10 Pr

#o+10 Phe+10 Ser+10 Thr+10 Asp+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

!+0

!Glu+10 Phe+10 Gly+10 Gly+10 Lys+10 Trp+10 Thr+10 Val+10 Asp+10 Gly+10 Pr

#o+10 Ala+10 Asp+10 Ile+10 Thr+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10



DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

133

PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Glu+10 Val+10 Leu+10 Ser+10 Gln+10 Ala+10 Trp+10 Asp+10 Val+10 Leu+10 Gl

#n+10 Leu+10 Val+10 Lys+10 His+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Asp+10 Ala+10 Glu+10 Glu+10 Glu+10 Arg+10 Val+10 Thr+10 Tyr+10 Glu+10 Se

#r+10 Lys+10 Pro+10 Thr+10 Pro+10 Ile ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Gln+10 Pro+10 Phe+10 Asn+10 Ala+10 Trp+10 Pro+10 Asp+10 Gly+10 Pro+10 Se

#r+10 Trp+10 Asn+10 Ala+10 Gln+10 Asp ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Phe+10 Thr+10 Arg+10 Ala+10 Pro+10 Ile+10 Val+10 Tyr+10 Pro+10 Ser+10 Al

#a+10 Glu+10 Val+10 Leu+10 Asp+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Glu+10 Ala+10 Leu+10 Lys+10 Val+10 Gly+10 Ala+10 Phe+10 Val+10 Ser+10 Ar

#g+10 Val+10 Leu+10 Gln+10 Cys+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Pro+10 Phe+10 Thr+10 Arg+10 Ser+10 Lys+10 Lys+10 Ser+10 Val+10 Thr+10 Va

#l+10 Arg+10 Asp+10 Ala+10 Gln+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Phe+10 Leu+10 Gly+10 Asp+10 Ser+10 Phe+10 Trp+10 Arg+10 Ile+10 Met+10 Gl

#n+10 Asn+10 Val+10 Tyr+10 Thr+10 Val ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Cys+10 Leu+10 Arg+10 Gln+10 His+10 Ile+10 Thr+10 Arg+10 Leu+10 Arg+10 Hi

#s+10 Pro+10 Ser+10 Ser+10 Lys+10 Ser ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Ile+10 Val+10 Asn+10 Cys+10 Asn+10 Asp+10 Pro+10 Leu+10 Trp+10 Tyr+10 Al

#a+10 Tyr+10 Ala+10 Asn+10 Gln+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!His+10 Trp+10 Arg+10 Gly+10 Met+10 Arg+10 Val+10 Pro+10 Ser+10 Leu+10 Ly

#s+10 Leu+10 Ala+10 Ser+10 Pro+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Glu+10 Glu+10 Asn+10 Ile+10 Gln+10 His+10 Gly+10 Pro+10 Met+10 Ala+10 Al

#a+10 Val+10 Phe+10 Arg+10 Asn+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Gly+10 Ala+10 Gly+10 Leu+10 Phe+10 Leu+10 Trp+10 Pro+10 Ala+10 Met+10 Ar

#g+10 Ala+10 Ala+10 Phe+10 Glu+10 Glu ?

!+10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 300 ?

!+0

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

135

PM

!Arg+10 Asp+10 Lys+10 Arg+10 Leu+10 Leu+10 Arg+10 Ala+10 Cys+10 Leu+10 Se

#r+10 Ser+10 Leu+10 Asp+10 Ile+10 Met ?

!305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#20 ?

!+0

!Asp+10 Ala+10 Ala+10 Val+10 Leu+10 Ala+10 Ser+10 Phe+10 Pro+10 Phe+10 Ty

#r+10 Trp+10 Arg+10 Gly+10 Val+10 Gln ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335 ?

!+0

!Asp+10 Thr+10 Ser+10 Arg+10 Phe+10 Glu+10 Pro+10 Ala+10 Leu+10 Gly+10 Cy

#s+10 Leu+10 Ser+10 Glu+10 Tyr+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?

!+0

!Ala+10 Leu+10 Val+10 Val+10 Leu+10 Leu+10 Ala+10 Glu+10 Thr+10 Val+10 Le

#u+10 Ala+10 Thr+10 Met+10 Phe+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 365 ?

!+0

!His+10 Ala+10 Leu+10 Val+10 Phe+10 Met+10 Arg+10 Ala+10 Leu+10 Ala+10 As

#p+10 Gly+10 Asn+10 Phe+10 Asp+10 Asp ?

!+10 +10 +10 +10 370+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 380 ?

!+0

!Tyr+10 Asp+10 Glu+10 Thr+10 Arg+10 Tyr+10 Ile+10 Asp+10 Pro+10 Val+10 Ly

#s+10 Asn+10 Glu+10 Tyr+10 Leu+10 Asn ?

!385+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#00 ?

!+0

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

136

PM

!Gly+10 Ala+10 Glu+10 Gly+10 Thr+10 Leu+10 Leu+10 Arg+10 Gly+10 Ile+10 Va

#1+10 Ala+10 Ser+10 Asn+10 Thr+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 405+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415 ?

!+0

!Leu+10 Ala+10 Val+10 Val+10 Cys+10 Ala+10 Asn+10 Thr+10 Tyr+10 Ser+10 Th

#r+10 Ile+10 Arg+10 Lys+10 Leu+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430 ?

!+0

!Ser+10 Val+10 Ala+10 Thr+10 Ser+10 Ala+10 Cys+10 Asn+10 Val+10 Ala+10 Ty

#r+10 Arg+10 Thr+10 Glu+10 Thr+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 435+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 440+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 445 ?

!+0

!Lys+10 Ala+10 Arg+10 Arg+10 Pro+10 Gly+10 Met+10 Ser+10 Asp+10 Ile+10 Ty

#r+10 Arg+10 Ile+10 Leu+10 Gln+10 Lys ?

!+10 +10 +10 +10 450+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 455+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 460 ?

!+0

!Glu+10 Phe+10 Phe+10 Phe+10 Tyr+10 Ile+10 Ala+10 Trp+10 Leu+10 Gln+10 Ar

#g+10 Val+10 Ala+10 Thr+10 His+10 Ala ?

!465+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#80 ?

!+0

!Asn+10 Phe+10 Cys+10 Leu+10 Asn+10 Ile+10 Leu+10 Lys+10 Arg+10 Ser+10 Va

#1+10 Asp+10 Thr+10 Gly+10 Pro+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 485+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 490+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 495 ?

!+0

!His+10 Phe+10 Cys+10 Ser+10 Gly+10 Pro+10 Ala+10 Arg+10 Arg+10 Ser+10 Gl

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PM

#y+10 Cys+10 Ser+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 500+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 505+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 510 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:4: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 110+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:4: ?

!+0

!Met+10 Leu+10 Cys+10 Pro+10 Leu+10 Leu+10 Val+10 Pro+10 Ile+10 Gln+10 Ty

#r+10 Glu+10 Asp+10 Phe+10 Ser+10 Lys ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Ala+10 Met+10 Gly+10 Ser+10 Glu+10 Leu+10 Lys+10 Arg+10 Glu+10 Lys+10 Le

#u+10 Glu+10 Thr+10 Phe+10 Val+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Ala+10 Ile+10 Ser+10 Ser+10 Asp+10 Arg+10 Asp+10 Pro+10 Arg+10 Gly+10 Se

#r+10 Leu+10 Arg+10 Phe+10 Leu+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Ser+10 Asp+10 His+10 Ala+10 Arg+10 Glu+10 Ile+10 Ile+10 Ala+10 Asp+10 Gl

#y+10 Val+10 Arg+10 Phe+10 Lys+10 Pro ?

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PM

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Val+10 Ile+10 Asp+10 Glu+10 Pro+10 Val+10 Arg+10 Ala+10 Ser+10 Val+10 Al

#a+10 Leu+10 Ser+10 Thr+10 Ala+10 Ala ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Ala+10 Gly+10 Lys+10 Val+10 Lys+10 Ala+10 Arg+10 Arg+10 Leu+10 Thr+10 Se

#r+10 Val+10 Arg+10 Ala+10 Pro+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Pro+10 Pro+10 Ala+10 Gly+10 Ala+10 Val+10 Ser+10 Ala+10 Arg+10 Arg+10 Ly

#s+10 Ser+10 Glu+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:5: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 292+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:5: ?

!+0

!Met+10 Ser+10 Gly+10 Phe+10 Ser+10 Asn+10 Ile+10 Gly+10 Ser+10 Ile+10 Al

#a+10 Thr+10 Val+10 Ser+10 Leu+10 Val ?

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PM

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Cys+10 Ser+10 Leu+10 Leu+10 Cys+10 Ala+10 Ser+10 Val+10 Leu+10 Gly+10 Al

#a+10 Pro+10 Val+10 Leu+10 Asp+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Leu+10 Glu+10 Ser+10 Ser+10 Pro+10 Phe+10 Pro+10 Phe+10 Gly+10 Gly+10 Ly

#s+10 Ile+10 Ile+10 Ala+10 Gln+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Cys+10 Asn+10 Arg+10 Thr+10 Thr+10 Ile+10 Glu+10 Val+10 Thr+10 Val+10 Pr

#o+10 Trp+10 Ser+10 Asp+10 Tyr+10 Ser ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Gly+10 Arg+10 Thr+10 Glu+10 Gly+10 Val+10 Ser+10 Val+10 Glu+10 Val+10 Ly

#s+10 Trp+10 Phe+10 Tyr+10 Gly+10 Asn ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Ser+10 Asn+10 Pro+10 Glu+10 Ser+10 Phe+10 Val+10 Phe+10 Gly+10 Val+10 As

#p+10 Ser+10 Glu+10 Thr+10 Gly+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Gly+10 His+10 Glu+10 Asp+10 Leu+10 Ser+10 Thr+10 Cys+10 Trp+10 Ala+10 Le

#u+10 Ile+10 His+10 Asn+10 Leu+10 Asn ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Ala+10 Ser+10 Val+10 Cys+10 Arg+10 Ala+10 Ser+10 Asp+10 Ala+10 Gly+10 Il

#e+10 Pro+10 Asp+10 Phe+10 Asp+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Gln+10 Cys+10 Glu+10 Lys+10 Val+10 Gln+10 Arg+10 Arg+10 Leu+10 Arg+10 Se

#r+10 Gly+10 Val+10 Glu+10 Leu+10 Gly ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Ser+10 Tyr+10 Val+10 Ser+10 Gly+10 Asn+10 Gly+10 Ser+10 Leu+10 Val+10 Le

#u+10 Tyr+10 Pro+10 Gly+10 Met+10 Tyr ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Asp+10 Ala+10 Gly+10 Ile+10 Tyr+10 Ala+10 Tyr+10 Gln+10 Leu+10 Ser+10 Va

#l+10 Gly+10 Gly+10 Lys+10 Gly+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Thr+10 Gly+10 Ser+10 Val+10 Tyr+10 Leu+10 Asp+10 Val+10 Gly+10 Pro+10 As

#n+10 Pro+10 Gly+10 Cys+10 His+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Gln+10 Tyr+10 Gly+10 Tyr+10 Thr+10 Tyr+10 Tyr+10 Ser+10 Leu+10 Ala+10 As

#p+10 Glu+10 Ala+10 Ser+10 Asp+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10



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141

PM

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Ser+10 Ser+10 Tyr+10 Asp+10 Val+10 Ala+10 Ser+10 Pro+10 Glu+10 Leu+10 As

#p+10 Gly+10 Pro+10 Met+10 Glu+10 Glu ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Asp+10 Tyr+10 Ser+10 Asn+10 Cys+10 Leu+10 Asp+10 Met+10 Pro+10 Pro+10 Le

#u+10 Arg+10 Pro+10 Trp+10 Thr+10 Thr ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Val+10 Cys+10 Ser+10 His+10 Asp+10 Val+10 Glu+10 Glu+10 Gln+10 Glu+10 As

#n+10 Ala+10 Thr+10 Asp+10 Glu+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Tyr+10 Leu+10 Trp+10 Asp+10 Glu+10 Glu+10 Cys+10 Ala+10 Gly+10 Pro+10 Le

#u+10 Asp+10 Glu+10 Tyr+10 Val+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Glu+10 Arg+10 Ser+10 Glu+10 Thr+10 Met+10 Pro+10 Arg+10 Met+10 Val+10 Va

#l+10 Phe+10 Ser+10 Pro+10 Pro+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Thr+10 Leu+10 Gln+10 Gln ?

!+10 +10 +10 +10 290 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:6: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 985+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:6: ?

!+0

!Met+10 Gly+10 Thr+10 Met+10 Leu+10 Val+10 Leu+10 Arg+10 Leu+10 Phe+10 Le

#u+10 Leu+10 Ala+10 Val+10 Ala+10 Asp ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Ala+10 Ala+10 Leu+10 Pro+10 Thr+10 Gly+10 Arg+10 Phe+10 Cys+10 Arg+10 Va

#l+10 Trp+10 Lys+10 Val+10 Pro+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Gly+10 Gly+10 Thr+10 Ile+10 Gln+10 Glu+10 Asn+10 Leu+10 Ala+10 Val+10 Le

#u+10 Ala+10 Glu+10 Ser+10 Pro+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Thr+10 Gly+10 His+10 Ala+10 Thr+10 Tyr+10 Pro+10 Pro+10 Pro+10 Glu+10 Gl

#y+10 Ala+10 Val+10 Ser+10 Phe+10 Gln ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Ile+10 Phe+10 Ala+10 Asp+10 Thr+10 Pro+10 Thr+10 Leu+10 Arg+10 Ile+10 Ar

#g+10 Tyr+10 Gly+10 Pro+10 Thr+10 Glu ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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PM

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Asp+10 Glu+10 Leu+10 Ala+10 Leu+10 Glu+10 Arg+10 Gly+10 Thr+10 Ser+10 Al

#a+10 Ser+10 Asp+10 Ala+10 Asp+10 Asn ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Val+10 Thr+10 Phe+10 Ser+10 Leu+10 Ser+10 Tyr+10 Arg+10 Pro+10 Arg+10 Pr

#o+10 Glu+10 Ile+10 His+10 Gly+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Tyr+10 Phe+10 Thr+10 Ile+10 Gly+10 Val+10 Phe+10 Ala+10 Thr+10 Gly+10 Gl

#n+10 Ser+10 Thr+10 Glu+10 Ser+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Tyr+10 Ser+10 Val+10 Ile+10 Ser+10 Arg+10 Val+10 Leu+10 Val+10 Asn+10 Al

#a+10 Ser+10 Leu+10 Glu+10 Arg+10 Ser ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Val+10 Arg+10 Leu+10 Glu+10 Thr+10 Pro+10 Cys+10 Asp+10 Glu+10 Asn+10 Ph

#e+10 Leu+10 Gln+10 Asn+10 Glu+10 Pro ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Thr+10 Trp+10 Gly+10 Ser+10 Lys+10 Arg+10 Trp+10 Leu+10 Gly+10 Pro+10 Pr

#o+10 Ser+10 Pro+10 Tyr+10 Val+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34  
144 PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?  
!+0

!Asp+10 Asn+10 Asp+10 Val+10 Ala+10 Val+10 Leu+10 Thr+10 Lys+10 Ala+10 Gl  
#n+10 Tyr+10 Ile+10 Gly+10 Glu+10 Cys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?  
!+0

!Tyr+10 Ser+10 Asn+10 Ser+10 Ala+10 Ala+10 Gln+10 Thr+10 Gly+10 Leu+10 Th  
#r+10 Ser+10 Leu+10 Asn+10 Met+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 205 ?  
!+0

!Phe+10 Phe+10 Tyr+10 Ser+10 Pro+10 Lys+10 Arg+10 Ile+10 Val+10 Asn+10 Va  
#l+10 Thr+10 Trp+10 Thr+10 Thr+10 Gly ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 220 ?  
!+0

!Gly+10 Pro+10 Ser+10 Pro+10 Ser+10 Arg+10 Ile+10 Thr+10 Val+10 Tyr+10 Se  
#r+10 Ser+10 Arg+10 Glu+10 Asn+10 Gly ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#40 ?  
!+0

!Gln+10 Pro+10 Val+10 Leu+10 Arg+10 Asn+10 Val+10 Ser+10 Asp+10 Gly+10 Ph  
#e+10 Leu+10 Val+10 Lys+10 Tyr+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?  
!+0

!Pro+10 Asp+10 Ile+10 Asp+10 Gly+10 Arg+10 Ala+10 Met+10 Ile+10 Asn+10 Va  
#l+10 Ile+10 Ala+10 Asn+10 Tyr+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10

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145

PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Pro+10 Ala+10 Asp+10 Ser+10 Gly+10 Ser+10 Val+10 Leu+10 Ala+10 Phe+10 Th

#r+10 Ala+10 Phe+10 Arg+10 Glu+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Lys+10 Leu+10 Pro+10 Ser+10 Ala+10 Ile+10 Gln+10 Leu+10 His+10 Arg+10 Il

#e+10 Asp+10 Met+10 Ser+10 Gly+10 Thr ?

!+10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 300 ?

!+0

!Glu+10 Pro+10 Pro+10 Gly+10 Thr+10 Glu+10 Thr+10 Thr+10 Phe+10 Asp+10 Cy

#s+10 Gln+10 Lys+10 Met+10 Ile+10 Glu ?

!305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#20 ?

!+0

!Thr+10 Pro+10 Tyr+10 Arg+10 Ala+10 Leu+10 Gly+10 Ser+10 Asn+10 Val+10 Pr

#o+10 Arg+10 Asp+10 Asp+10 Ser+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335 ?

!+0

!Arg+10 Pro+10 Gly+10 Ala+10 Thr+10 Leu+10 Pro+10 Pro+10 Phe+10 Asp+10 Th

#r+10 Ala+10 Ala+10 Pro+10 Asp+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?

!+0

!Asp+10 Thr+10 Gly+10 Thr+10 Ser+10 Pro+10 Thr+10 Pro+10 Thr+10 Thr+10 Va

#l+10 Pro+10 Glu+10 Pro+10 Ala+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 365 ?

!+0

!Thr+10 Thr+10 Leu+10 Ile+10 Pro+10 Arg+10 Ser+10 Thr+10 Ser+10 Asp+10 Me

#t+10 Gly+10 Phe+10 Phe+10 Ser+10 Thr ?

!+10 +10 +10 +10 370+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 380 ?

!+0

!Ala+10 Arg+10 Ala+10 Thr+10 Gly+10 Ser+10 Glu+10 Thr+10 Leu+10 Ser+10 Va

#l+10 Pro+10 Val+10 Gln+10 Glu+10 Thr ?

!385+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#00 ?

!+0

!Asp+10 Arg+10 Thr+10 Leu+10 Ser+10 Thr+10 Thr+10 Pro+10 Leu+10 Thr+10 Le

#u+10 Pro+10 Leu+10 Thr+10 Pro+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 405+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415 ?

!+0

!Glu+10 Ser+10 Glu+10 Asn+10 Thr+10 Leu+10 Phe+10 Pro+10 Thr+10 Thr+10 Al

#a+10 Pro+10 Gly+10 Ile+10 Ser+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430 ?

!+0

!Glu+10 Thr+10 Pro+10 Ser+10 Ala+10 Ala+10 His+10 Glu+10 Thr+10 Thr+10 Gl

#n+10 Thr+10 Gln+10 Ser+10 Ala+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 435+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 440+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 445 ?

!+0

!Thr+10 Val+10 Val+10 Phe+10 Thr+10 Gln+10 Ser+10 Pro+10 Ser+10 Thr+10 Gl

#u+10 Ser+10 Glu+10 Thr+10 Ala+10 Arg ?

!+10 +10 +10 +10 450+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 455+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 460 ?

!+0

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147

PM

!Ser+10 Gln+10 Ser+10 Gln+10 Glu+10 Pro+10 Trp+10 Tyr+10 Phe+10 Thr+10 Gl

#n+10 Thr+10 Pro+10 Ser+10 Thr+10 Glu ?

!465+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#80 ?

!+0

!Gln+10 Ala+10 Ala+10 Leu+10 Thr+10 Gln+10 Thr+10 Gln+10 Ile+10 Ala+10 Gl

#u+10 Thr+10 Glu+10 Ala+10 Leu+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 485+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 490+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 495 ?

!+0

!Thr+10 Gln+10 Thr+10 Pro+10 Ser+10 Ala+10 Glu+10 Gln+10 Met+10 Thr+10 Ph

#e+10 Thr+10 Gln+10 Thr+10 Pro+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 500+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 505+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 510 ?

!+0

!Ala+10 Glu+10 Thr+10 Glu+10 Ala+10 Pro+10 Ala+10 Gln+10 Thr+10 Pro+10 Se

#r+10 Thr+10 Ile+10 Pro+10 Glu+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 515+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 520+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 525 ?

!+0

!Phe+10 Thr+10 Gln+10 Ser+10 Arg+10 Ser+10 Thr+10 Pro+10 Pro+10 Glu+10 Th

#r+10 Ala+10 Arg+10 Ala+10 Pro+10 Ser ?

!+10 +10 +10 +10 530+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 535+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 540 ?

!+0

!Ala+10 Ala+10 Pro+10 Glu+10 Val+10 Phe+10 Thr+10 Gln+10 Ser+10 Ser+10 Se

#r+10 Thr+10 Val+10 Thr+10 Glu+10 Val ?

!545+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#60 ?

!+0

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148

PM

!Phe+10 Thr+10 Gln+10 Thr+10 Pro+10 Ser+10 Thr+10 Val+10 Pro+10 Lys+10 Th

#r+10 Thr+10 Leu+10 Ser+10 Ser+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 565+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 570+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 575 ?

!+0

!Thr+10 Glu+10 Pro+10 Ala+10 Ile+10 Phe+10 Thr+10 Arg+10 Thr+10 Gln+10 Se

#r+10 Ala+10 Gly+10 Thr+10 Glu+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 580+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 585+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 590 ?

!+0

!Phe+10 Thr+10 Gln+10 Thr+10 Ser+10 Ser+10 Ala+10 Glu+10 Pro+10 Asp+10 Th

#r+10 Met+10 Arg+10 Thr+10 Gln+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 595+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 600+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 605 ?

!+0

!Thr+10 Glu+10 Thr+10 His+10 Phe+10 Phe+10 Thr+10 Gln+10 Ala+10 Pro+10 Se

#r+10 Thr+10 Val+10 Pro+10 Lys+10 Ala ?

!+10 +10 +10 +10 610+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 615+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 620 ?

!+0

!Thr+10 Gln+10 Thr+10 Pro+10 Ser+10 Thr+10 Glu+10 Pro+10 Glu+10 Val+10 Le

#u+10 Thr+10 Gln+10 Ser+10 Pro+10 Ser ?

!625+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 6

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 6

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 6

#40 ?

!+0

!Thr+10 Glu+10 Pro+10 Val+10 Pro+10 Phe+10 Thr+10 Arg+10 Thr+10 Leu+10 Gl

#y+10 Ala+10 Glu+10 Pro+10 Glu+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 645+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 650+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 655 ?

!+0

!Thr+10 Gln+10 Thr+10 Pro+10 Ser+10 Ala+10 Ala+10 Pro+10 Glu+10 Val+10 Ty



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149 PM

#r+10 Thr+10 Arg+10 Ser+10 Ser+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 660+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 665+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 670 ?

!+0

!Thr+10 Met+10 Pro+10 Glu+10 Thr+10 Ala+10 Gln+10 Ser+10 Thr+10 Pro+10 Le

#u+10 Ala+10 Ser+10 Gln+10 Asn+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 675+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 680+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 685 ?

!+0

!Thr+10 Ser+10 Ser+10 Gly+10 Thr+10 Gly+10 Thr+10 His+10 Asn+10 Thr+10 Gl

#u+10 Pro+10 Arg+10 Thr+10 Tyr+10 Pro ?

!+10 +10 +10 +10 690+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 695+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 700 ?

!+0

!Val+10 Gln+10 Thr+10 Thr+10 Pro+10 His+10 Thr+10 Gln+10 Lys+10 Leu+10 Ty

#r+10 Thr+10 Glu+10 Asn+10 Lys+10 Thr ?

!705+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 7

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 7

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 7

#20 ?

!+0

!Leu+10 Ser+10 Phe+10 Pro+10 Thr+10 Val+10 Val+10 Ser+10 Glu+10 Phe+10 Hi

#s+10 Glu+10 Met+10 Ser+10 Thr+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 725+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 730+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 735 ?

!+0

!Glu+10 Ser+10 Gln+10 Thr+10 Pro+10 Leu+10 Leu+10 Asp+10 Val+10 Lys+10 Il

#e+10 Val+10 Glu+10 Val+10 Lys+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 740+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 745+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 750 ?

!+0

!Ser+10 Asn+10 Asp+10 Gly+10 Glu+10 Val+10 Thr+10 Ala+10 Thr+10 Cys+10 Va

#l+10 Ser+10 Thr+10 Val+10 Lys+10 Ser ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

150

PM

!+10 +10 +10 +10 +10 +10 +10 +10 755+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 760+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 765 ?

!+0

!Pro+10 Tyr+10 Arg+10 Val+10 Glu+10 Thr+10 Asn+10 Trp+10 Lys+10 Val+10 As

#p+10 Leu+10 Val+10 Asp+10 Val+10 Met ?

!+10 +10 +10 +10 770+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 775+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 780 ?

!+0

!Asp+10 Glu+10 Ile+10 Ser+10 Gly+10 Asn+10 Ser+10 Pro+10 Ala+10 Gly+10 Va

#l+10 Phe+10 Asn+10 Ser+10 Asn+10 Glu ?

!785+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 7

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 7

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 8

#00 ?

!+0

!Lys+10 Trp+10 Gln+10 Lys+10 Gln+10 Leu+10 Tyr+10 Tyr+10 Arg+10 Val+10 Th

#r+10 Asp+10 Gly+10 Arg+10 Thr+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 805+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 810+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 815 ?

!+0

!Val+10 Gln+10 Leu+10 Met+10 Cys+10 Leu+10 Ser+10 Cys+10 Thr+10 Ser+10 Hi

#s+10 Ser+10 Pro+10 Glu+10 Pro+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 820+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 825+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 830 ?

!+0

!Cys+10 Leu+10 Phe+10 Asp+10 Thr+10 Ser+10 Leu+10 Ile+10 Ala+10 Arg+10 Gl

#u+10 Lys+10 Asp+10 Ile+10 Ala+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 835+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 840+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 845 ?

!+0

!Glu+10 Leu+10 Tyr+10 Phe+10 Thr+10 Ser+10 Asp+10 Pro+10 Gln+10 Thr+10 Al

#a+10 Tyr+10 Cys+10 Thr+10 Ile+10 Thr ?

!+10 +10 +10 +10 850+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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PM

#+10 +10 +10 855+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 860 ?

!+0

!Leu+10 Pro+10 Ser+10 Gly+10 Val+10 Val+10 Pro+10 Arg+10 Phe+10 Glu+10 Tr

#p+10 Ser+10 Leu+10 Asn+10 Asn+10 Val ?

!865+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 8

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 8

#75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 8

#80 ?

!+0

!Ser+10 Leu+10 Pro+10 Glu+10 Tyr+10 Leu+10 Thr+10 Ala+10 Thr+10 Thr+10 Va

#l+10 Val+10 Ser+10 His+10 Thr+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 885+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 890+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 895 ?

!+0

!Gly+10 Gln+10 Ser+10 Thr+10 Val+10 Trp+10 Lys+10 Ser+10 Ser+10 Ala+10 Ar

#g+10 Ala+10 Gly+10 Glu+10 Ala+10 Trp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 900+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 905+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 910 ?

!+0

!Ile+10 Ser+10 Gly+10 Arg+10 Gly+10 Gly+10 Asn+10 Ile+10 Tyr+10 Glu+10 Cy

#s+10 Thr+10 Val+10 Leu+10 Ile+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 915+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 920+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 925 ?

!+0

!Asp+10 Gly+10 Thr+10 Arg+10 Val+10 Thr+10 Thr+10 Arg+10 Lys+10 Glu+10 Ar

#g+10 Cys+10 Leu+10 Thr+10 Asn+10 Thr ?

!+10 +10 +10 +10 930+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 935+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 940 ?

!+0

!Trp+10 Ile+10 Ala+10 Val+10 Glu+10 Asn+10 Gly+10 Ala+10 Ala+10 Gln+10 Al

#a+10 Gln+10 Leu+10 Tyr+10 Ser+10 Leu ?

!945+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 9

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 9

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

152

PM

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 9

#60 ?

!+0

!Phe+10 Ser+10 Gly+10 Leu+10 Val+10 Ser+10 Gly+10 Leu+10 Cys+10 Gly+10 Se

#r+10 Ile+10 Ser+10 Ala+10 Leu+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 965+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 970+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 975 ?

!+0

!Ala+10 Thr+10 Leu+10 Trp+10 Thr+10 Ala+10 Ile+10 Tyr+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 980+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 985 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:7: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 362+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:7: ?

!+0

!Met+10 Ala+10 Ser+10 Leu+10 Leu+10 Gly+10 Thr+10 Leu+10 Ala+10 Leu+10 Le

#u+10 Ala+10 Ala+10 Thr+10 Leu+10 Ala ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Pro+10 Phe+10 Gly+10 Ala+10 Met+10 Gly+10 Ile+10 Val+10 Ile+10 Thr+10 Gl

#y+10 Asn+10 His+10 Val+10 Ser+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

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PM

!Arg+10 Ile+10 Asp+10 Asp+10 Asp+10 His+10 Ile+10 Val+10 Ile+10 Val+10 Al

#a+10 Pro+10 Arg+10 Pro+10 Glu+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Thr+10 Ile+10 Gln+10 Leu+10 Gln+10 Leu+10 Phe+10 Phe+10 Met+10 Pro+10 Gl

#y+10 Gln+10 Arg+10 Pro+10 His+10 Lys ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Pro+10 Tyr+10 Ser+10 Gly+10 Thr+10 Val+10 Arg+10 Val+10 Ala+10 Phe+10 Ar

#g+10 Ser+10 Asp+10 Ile+10 Thr+10 Asn ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Gln+10 Cys+10 Tyr+10 Gln+10 Glu+10 Leu+10 Ser+10 Glu+10 Glu+10 Arg+10 Ph

#e+10 Glu+10 Asn+10 Cys+10 Thr+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Arg+10 Ser+10 Ser+10 Ser+10 Val+10 Phe+10 Val+10 Gly+10 Cys+10 Lys+10 Va

#l+10 Thr+10 Glu+10 Tyr+10 Thr+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Ser+10 Ala+10 Ser+10 Asn+10 Arg+10 Leu+10 Thr+10 Gly+10 Pro+10 Pro+10 Hi

#s+10 Pro+10 Phe+10 Lys+10 Leu+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Ile+10 Arg+10 Asn+10 Pro+10 Arg+10 Pro+10 Asn+10 Asp+10 Ser+10 Gly+10 Me

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

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PM

#t+10 Phe+10 Tyr+10 Val+10 Ile+10 Val ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Arg+10 Leu+10 Asp+10 Asp+10 Thr+10 Lys+10 Glu+10 Pro+10 Ile+10 Asp+10 Va

#l+10 Phe+10 Ala+10 Ile+10 Gln+10 Leu ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Ser+10 Val+10 Tyr+10 Gln+10 Phe+10 Ala+10 Asn+10 Thr+10 Ala+10 Ala+10 Th

#r+10 Arg+10 Gly+10 Leu+10 Tyr+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Lys+10 Ala+10 Ser+10 Cys+10 Arg+10 Thr+10 Phe+10 Gly+10 Leu+10 Pro+10 Th

#r+10 Val+10 Gln+10 Leu+10 Glu+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Tyr+10 Leu+10 Arg+10 Thr+10 Glu+10 Glu+10 Ser+10 Trp+10 Arg+10 Asn+10 Tr

#p+10 Gln+10 Ala+10 Tyr+10 Val+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Thr+10 Glu+10 Ala+10 Thr+10 Thr+10 Thr+10 Ser+10 Ala+10 Glu+10 Ala+10 Th

#r+10 Thr+10 Pro+10 Thr+10 Pro+10 Val ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Thr+10 Ala+10 Thr+10 Ser+10 Ala+10 Ser+10 Glu+10 Leu+10 Glu+10 Ala+10 Gl

#u+10 His+10 Phe+10 Thr+10 Phe+10 Pro ?

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PM

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Trp+10 Leu+10 Glu+10 Asn+10 Gly+10 Val+10 Asp+10 His+10 Tyr+10 Glu+10 Pr

#o+10 Thr+10 Pro+10 Ala+10 Asn+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Asn+10 Ser+10 Asn+10 Val+10 Thr+10 Val+10 Arg+10 Leu+10 Gly+10 Thr+10 Me

#t+10 Ser+10 Pro+10 Thr+10 Leu+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Gly+10 Val+10 Thr+10 Val+10 Ala+10 Ala+10 Val+10 Val+10 Ser+10 Ala+10 Th

#r+10 Ile+10 Gly+10 Leu+10 Val+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Val+10 Ile+10 Ser+10 Ile+10 Val+10 Thr+10 Arg+10 Asn+10 Met+10 Cys+10 Th

#r+10 Pro+10 His+10 Arg+10 Lys+10 Leu ?

!+10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 300 ?

!+0

!Asp+10 Thr+10 Val+10 Ser+10 Gln+10 Asp+10 Asp+10 Glu+10 Glu+10 Arg+10 Se

#r+10 Gln+10 Thr+10 Arg+10 Arg+10 Glu ?

!305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#20 ?

!+0

!Ser+10 Arg+10 Lys+10 Phe+10 Gly+10 Pro+10 Met+10 Val+10 Ala+10 Cys+10 Gl

#u+10 Ile+10 Asn+10 Lys+10 Gly+10 Ala ?

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PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335 ?

!+0

!Asp+10 Gln+10 Asp+10 Ser+10 Glu+10 Leu+10 Val+10 Glu+10 Leu+10 Val+10 Al

#a+10 Ile+10 Val+10 Asn+10 Pro+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?

!+0

!Ala+10 Leu+10 Ser+10 Ser+10 Pro+10 Asp+10 Ser+10 Ile+10 Lys+10 Met ?

!+10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 360 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:8: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 499+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:8: ?

!+0

!Met+10 Asn+10 Met+10 Leu+10 Val+10 Ile+10 Val+10 Leu+10 Ala+10 Ser+10 Cy

#s+10 Leu+10 Ala+10 Arg+10 Leu+10 Thr ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Phe+10 Ala+10 Thr+10 Arg+10 His+10 Val+10 Leu+10 Phe+10 Leu+10 Glu+10 Gl

#y+10 Thr+10 Gln+10 Ala+10 Val+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?



!+0

!Gly+10 Glu+10 Asp+10 Asp+10 Pro+10 Arg+10 Asn+10 Val+10 Pro+10 Glu+10 Gl  
#y+10 Thr+10 Val+10 Ile+10 Lys+10 Trp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Thr+10 Lys+10 Val+10 Leu+10 Arg+10 Asn+10 Ala+10 Cys+10 Lys+10 Met+10 Ly  
#s+10 Ala+10 Ala+10 Asp+10 Val+10 Cys ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 60 ?

!+0

!Ser+10 Ser+10 Pro+10 Asn+10 Tyr+10 Cys+10 Phe+10 His+10 Asp+10 Leu+10 Il  
#e+10 Tyr+10 Asp+10 Gly+10 Gly+10 Lys ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 80 ?

!+0

!Lys+10 Asp+10 Cys+10 Pro+10 Pro+10 Ala+10 Gly+10 Pro+10 Leu+10 Ser+10 Al  
#a+10 Asn+10 Leu+10 Val+10 Ile+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Leu+10 Lys+10 Arg+10 Gly+10 Glu+10 Ser+10 Phe+10 Val+10 Val+10 Leu+10 Gl  
#y+10 Ser+10 Gly+10 Leu+10 His+10 Asn ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Ser+10 Asn+10 Ile+10 Thr+10 Asn+10 Ile+10 Met+10 Trp+10 Thr+10 Glu+10 Ty  
#r+10 Gly+10 Gly+10 Leu+10 Leu+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

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PM

!Asp+10 Pro+10 Val+10 Thr+10 Arg+10 Ser+10 Asp+10 Glu+10 Gly+10 Ile+10 Ty

#r+10 Phe+10 Arg+10 Arg+10 Ile+10 Ser ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Gln+10 Pro+10 Asp+10 Leu+10 Ala+10 Met+10 Glu+10 Thr+10 Thr+10 Ser+10 Ty

#r+10 Asn+10 Val+10 Ser+10 Val+10 Leu ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Ser+10 His+10 Val+10 Asp+10 Glu+10 Lys+10 Ala+10 Pro+10 Ala+10 Pro+10 Hi

#s+10 Glu+10 Val+10 Glu+10 Ile+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Thr+10 Ile+10 Lys+10 Pro+10 Ser+10 Glu+10 Ala+10 His+10 Ala+10 His+10 Va

#l+10 Glu+10 Leu+10 Gln+10 Met+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Pro+10 Phe+10 His+10 Glu+10 Leu+10 Asn+10 Asp+10 Asn+10 Ser+10 Pro+10 Th

#r+10 Tyr+10 Val+10 Thr+10 Pro+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Leu+10 Arg+10 Val+10 Phe+10 Pro+10 Pro+10 Thr+10 Glu+10 His+10 Val+10 Ly

#s+10 Phe+10 Asn+10 Val+10 Thr+10 Tyr ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Ser+10 Trp+10 Tyr+10 Gly+10 Phe+10 Asp+10 Val+10 Lys+10 Glu+10 Glu+10 Cy

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PM

#s+10 Glu+10 Glu+10 Val+10 Lys+10 Leu ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Phe+10 Glu+10 Pro+10 Cys+10 Val+10 Tyr+10 His+10 Pro+10 Thr+10 Asp+10 Gl

#y+10 Lys+10 Cys+10 Gln+10 Phe+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Ala+10 Thr+10 Asn+10 Gln+10 Arg+10 Cys+10 Leu+10 Ile+10 Gly+10 Ser+10 Va

#l+10 Leu+10 Met+10 Ala+10 Glu+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Leu+10 Gly+10 Ala+10 Ala+10 Ser+10 Leu+10 Leu+10 Asp+10 Cys+10 Ser+10 Ar

#g+10 Asp+10 Thr+10 Leu+10 Glu+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Cys+10 His+10 Glu+10 Asn+10 Arg+10 Val+10 Pro+10 Asn+10 Leu+10 Arg+10 Ph

#e+10 Asp+10 Ser+10 Arg+10 Leu+10 Ser ?

!+10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 300 ?

!+0

!Glu+10 Ser+10 Arg+10 Ala+10 Gly+10 Leu+10 Val+10 Ile+10 Ser+10 Pro+10 Le

#u+10 Ile+10 Ala+10 Ile+10 Pro+10 Lys ?

!305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#20 ?

!+0

!Val+10 Leu+10 Ile+10 Ile+10 Val+10 Val+10 Ser+10 Asp+10 Gly+10 Asp+10 Il

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PM

#e+10 Leu+10 Gly+10 Trp+10 Ser+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335 ?

!+0

!Thr+10 Val+10 Leu+10 Gly+10 Lys+10 Arg+10 Asn+10 Ser+10 Pro+10 Arg+10 Va

#l+10 Val+10 Val+10 Glu+10 Thr+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?

!+0

!Met+10 Pro+10 Ser+10 Lys+10 Val+10 Pro+10 Met+10 Asn+10 Lys+10 Val+10 Va

#l+10 Ile+10 Gly+10 Ser+10 Pro+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 365 ?

!+0

!Pro+10 Met+10 Asp+10 Glu+10 Thr+10 Gly+10 Asn+10 Tyr+10 Lys+10 Met+10 Ty

#r+10 Phe+10 Val+10 Val+10 Ala+10 Gly ?

!+10 +10 +10 +10 370+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 380 ?

!+0

!Val+10 Ala+10 Ala+10 Thr+10 Cys+10 Val+10 Ile+10 Leu+10 Thr+10 Cys+10 Al

#a+10 Leu+10 Leu+10 Val+10 Gly+10 Lys ?

!385+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#00 ?

!+0

!Lys+10 Lys+10 Cys+10 Pro+10 Ala+10 His+10 Gln+10 Met+10 Gly+10 Thr+10 Ph

#e+10 Ser+10 Lys+10 Thr+10 Glu+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 405+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415 ?

!+0

!Leu+10 Tyr+10 Ala+10 Pro+10 Leu+10 Pro+10 Lys+10 Asn+10 Glu+10 Phe+10 Gl

#u+10 Ala+10 Gly+10 Gly+10 Leu+10 Thr ?

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PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430 ?

!+0

!Asp+10 Asp+10 Glu+10 Glu+10 Val+10 Ile+10 Tyr+10 Asp+10 Glu+10 Val+10 Ty

#r+10 Glu+10 Pro+10 Leu+10 Phe+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 435+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 440+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 445 ?

!+0

!Gly+10 Tyr+10 Cys+10 Lys+10 Gln+10 Glu+10 Phe+10 Arg+10 Glu+10 Asp+10 Va

#l+10 Asn+10 Thr+10 Phe+10 Phe+10 Gly ?

!+10 +10 +10 +10 450+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 455+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 460 ?

!+0

!Ala+10 Val+10 Val+10 Glu+10 Gly+10 Glu+10 Arg+10 Ala+10 Leu+10 Asn+10 Ph

#e+10 Lys+10 Ser+10 Ala+10 Ile+10 Ala ?

!465+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#80 ?

!+0

!Ser+10 Met+10 Ala+10 Asp+10 Arg+10 Ile+10 Leu+10 Ala+10 Asn+10 Lys+10 Se

#r+10 Gly+10 Arg+10 Arg+10 Asn+10 Met ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 485+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 490+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 495 ?

!+0

!Asp+10 Ser+10 Tyr ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:9: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 260+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

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PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:9: ?

!+0

!Met+10 Pro+10 Phe+10 Lys+10 Thr+10 Arg+10 Gly+10 Ala+10 Glu+10 Asp+10 Al

#a+10 Ala+10 Ala+10 Gly+10 Lys+10 Asn ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Arg+10 Phe+10 Lys+10 Lys+10 Ser+10 Arg+10 Asn+10 Arg+10 Glu+10 Ile+10 Le

#u+10 Pro+10 Thr+10 Arg+10 Leu+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Gly+10 Thr+10 Gly+10 Lys+10 Lys+10 Thr+10 Ala+10 Gly+10 Leu+10 Ser+10 As

#n+10 Tyr+10 Thr+10 Gln+10 Pro+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Pro+10 Trp+10 Asn+10 Pro+10 Lys+10 Phe+10 Cys+10 Ser+10 Ala+10 Arg+10 Gl

#y+10 Glu+10 Ser+10 Asp+10 Asn+10 His ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Ala+10 Cys+10 Lys+10 Asp+10 Thr+10 Phe+10 Tyr+10 Arg+10 Arg+10 Thr+10 Cy

#s+10 Cys+10 Ala+10 Ser+10 Arg+10 Ser ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Thr+10 Val+10 Ser+10 Ser+10 Gln+10 Pro+10 Asp+10 Ser+10 Pro+10 His+10 Th

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PM

#r+10 Pro+10 Met+10 Pro+10 Thr+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Tyr+10 Gly+10 Arg+10 Val+10 Pro+10 Ser+10 Ala+10 Lys+10 Arg+10 Lys+10 Ly

#s+10 Leu+10 Ser+10 Ser+10 Ser+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Xaa+10 Glu+10 Gly+10 Ala+10 His+10 Gln+10 Pro+10 Leu+10 Val+10 Ser+10 Cy

#s+10 Lys+10 Leu+10 Pro+10 Asp+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Gln+10 Ala+10 Ala+10 Pro+10 Ala+10 Arg+10 Thr+10 Tyr+10 Ser+10 Ser+10 Al

#a+10 Gln+10 Arg+10 Tyr+10 Thr+10 Val ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Asp+10 Glu+10 Val+10 Ser+10 Ser+10 Pro+10 Thr+10 Pro+10 Pro+10 Gly+10 Va

#l+10 Asp+10 Ala+10 Val+10 Ala+10 Asp ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Leu+10 Glu+10 Thr+10 Arg+10 Ala+10 Glu+10 Leu+10 Pro+10 Gly+10 Ala+10 Th

#r+10 Thr+10 Glu+10 Gln+10 Thr+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Ser+10 Lys+10 Asn+10 Lys+10 Leu+10 Pro+10 Asn+10 Gln+10 Gln+10 Ser+10 Ar

#g+10 Leu+10 Lys+10 Pro+10 Lys+10 Pro ?

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PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Thr+10 Asn+10 Glu+10 His+10 Val+10 Gly+10 Gly+10 Glu+10 Arg+10 Cys+10 Pr

#o+10 Ser+10 Glu+10 Gly+10 Thr+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 205 ?

!+0

!Glu+10 Ala+10 Pro+10 Ser+10 Leu+10 Gly+10 Ile+10 Leu+10 Ser+10 Arg+10 Va

#l+10 Gly+10 Ala+10 Ala+10 Ile+10 Ala ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Asn+10 Glu+10 Leu+10 Ala+10 Arg+10 Met+10 Arg+10 Arg+10 Ala+10 Cys+10 Le

#u+10 Pro+10 Leu+10 Ala+10 Ala+10 Ser ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Ala+10 Ala+10 Ala+10 Ala+10 Gly+10 Ile+10 Val+10 Ala+10 Trp+10 Ala+10 Al

#a+10 Ala+10 Arg+10 Ala+10 Leu+10 Gln ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Lys+10 Gln+10 Gly+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:10: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH+10 1305+10 base+10

#pairs ?



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PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 1..1305 ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:10: ?

!+0

!ATG+10 CAC+10 CGT+10 CCT+10 CAT+10 CTC+10 AGA+10 CGG+10 CAC+10 TCG+10 CG

#T+10 TAC+10 TAC+10 GCG+10 AAA+10 GGA+10 +10 +10 +10 +10 +10 +10 48 ?

!Met+10 His+10 Arg+10 Pro+10 His+10 Leu+10 Arg+10 Arg+10 His+10 Ser+10 Ar

#g+10 Tyr+10 Tyr+10 Ala+10 Lys+10 Gly ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!GAG+10 GTG+10 CTT+10 AAC+10 AAA+10 CAC+10 ATG+10 GAT+10 TGC+10 GGT+10 GG

#A+10 AAA+10 CGG+10 TGC+10 TGC+10 TCA+10 +10 +10 +10 +10 +10 +10 96 ?

!Glu+10 Val+10 Leu+10 Asn+10 Lys+10 His+10 Met+10 Asp+10 Cys+10 Gly+10 Gl

#y+10 Lys+10 Arg+10 Cys+10 Cys+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!GGC+10 GCA+10 GCT+10 GTA+10 TTC+10 ACT+10 CTT+10 TTC+10 TGG+10 ACT+10 TG

#T+10 GTC+10 AGG+10 ATT+10 ATG+10 CGG+10 +10 +10 +10 +10 +10 +10 144 ?

!Gly+10 Ala+10 Ala+10 Val+10 Phe+10 Thr+10 Leu+10 Phe+10 Trp+10 Thr+10 Cy

#s+10 Val+10 Arg+10 Ile+10 Met+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!GAG+10 CAT+10 ATC+10 TGC+10 TTT+10 GTA+10 CGC+10 AAC+10 GCT+10 ATG+10 GA

#C+10 CGC+10 CAT+10 TTA+10 TTT+10 TTG+10 +10 +10 +10 +10 +10 192 ?

!Glu+10 His+10 Ile+10 Cys+10 Phe+10 Val+10 Arg+10 Asn+10 Ala+10 Met+10 As

#p+10 Arg+10 His+10 Leu+10 Phe+10 Leu ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!AGG+10 AAT+10 GCT+10 TTT+10 TGG+10 ACT+10 ATC+10 GTA+10 CTG+10 CTT+10 TC

#T+10 TCC+10 TTC+10 GCT+10 AGC+10 CAG+10 +10 +10 +10 +10 +10 240 ?

!Arg+10 Asn+10 Ala+10 Phe+10 Trp+10 Thr+10 Ile+10 Val+10 Leu+10 Leu+10 Se

#r+10 Ser+10 Phe+10 Ala+10 Ser+10 Gln ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!AGC+10 ACC+10 GCC+10 GCC+10 GTC+10 ACG+10 TAC+10 GAC+10 TAC+10 ATT+10 TT

#A+10 GGC+10 CGT+10 CGC+10 GCG+10 CTC+10 +10 +10 +10 +10 +10 288 ?

!Ser+10 Thr+10 Ala+10 Ala+10 Val+10 Thr+10 Tyr+10 Asp+10 Tyr+10 Ile+10 Le

#u+10 Gly+10 Arg+10 Arg+10 Ala+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!GAC+10 GCG+10 CTA+10 ACC+10 ATA+10 CCG+10 GCG+10 GTT+10 GGC+10 CCG+10 TA

#T+10 AAC+10 AGA+10 TAC+10 CTC+10 ACT+10 +10 +10 +10 +10 +10 336 ?

!Asp+10 Ala+10 Leu+10 Thr+10 Ile+10 Pro+10 Ala+10 Val+10 Gly+10 Pro+10 Ty

#r+10 Asn+10 Arg+10 Tyr+10 Leu+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!AGG+10 GTA+10 TCA+10 AGA+10 GGC+10 TGC+10 GAC+10 GTT+10 GTC+10 GAG+10 CT

#C+10 AAC+10 CCG+10 ATT+10 TCT+10 AAC+10 +10 +10 +10 +10 +10 384 ?

!Arg+10 Val+10 Ser+10 Arg+10 Gly+10 Cys+10 Asp+10 Val+10 Val+10 Glu+10 Le

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PM

#u+10 Asn+10 Pro+10 Ile+10 Ser+10 Asn ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!GTG+10 GAC+10 GAC+10 ATG+10 ATA+10 TCG+10 GCG+10 GCC+10 AAA+10 GAA+10 AA

#A+10 GAG+10 AAG+10 GGG+10 GGC+10 CCT+10 +10 +10 +10 +10 +10 432 ?

!Val+10 Asp+10 Asp+10 Met+10 Ile+10 Ser+10 Ala+10 Ala+10 Lys+10 Glu+10 Ly

#s+10 Glu+10 Lys+10 Gly+10 Gly+10 Pro ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!TTC+10 GAG+10 GCC+10 TCC+10 GTC+10 GTC+10 TGG+10 TTC+10 TAC+10 GTG+10 AT

#T+10 AAG+10 GGC+10 GAC+10 GAC+10 GGC+10 +10 +10 +10 +10 +10 480 ?

!Phe+10 Glu+10 Ala+10 Ser+10 Val+10 Val+10 Trp+10 Phe+10 Tyr+10 Val+10 Il

#e+10 Lys+10 Gly+10 Asp+10 Asp+10 Gly ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!GAG+10 GAC+10 AAG+10 TAC+10 TGT+10 CCA+10 ATC+10 TAT+10 AGA+10 AAA+10 GA

#G+10 TAC+10 AGG+10 GAA+10 TGT+10 GGC+10 +10 +10 +10 +10 +10 528 ?

!Glu+10 Asp+10 Lys+10 Tyr+10 Cys+10 Pro+10 Ile+10 Tyr+10 Arg+10 Lys+10 Gl

#u+10 Tyr+10 Arg+10 Glu+10 Cys+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!GAC+10 GTA+10 CAA+10 CTG+10 CTA+10 TCT+10 GAA+10 TGC+10 GCC+10 GTT+10 CA

#A+10 TCT+10 GCA+10 CAG+10 ATG+10 TGG+10 +10 +10 +10 +10 +10 576 ?

!Asp+10 Val+10 Gln+10 Leu+10 Leu+10 Ser+10 Glu+10 Cys+10 Ala+10 Val+10 Gl

#n+10 Ser+10 Ala+10 Gln+10 Met+10 Trp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

168

PM

!GCA+10 GTG+10 GAC+10 TAT+10 GTT+10 CCT+10 AGC+10 ACC+10 CTT+10 GTA+10 TC  
#G+10 CGA+10 AAT+10 GGC+10 GCG+10 GGA+10 +10 +10 +10 +10 +10 624 ?  
!Ala+10 Val+10 Asp+10 Tyr+10 Val+10 Pro+10 Ser+10 Thr+10 Leu+10 Val+10 Se  
#r+10 Arg+10 Asn+10 Gly+10 Ala+10 Gly ?  
!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 205 ?  
!+0  
!CTG+10 ACT+10 ATA+10 TTC+10 TCC+10 CCC+10 ACT+10 GCT+10 GCG+10 CTC+10 TC  
#T+10 GGC+10 CAA+10 TAC+10 TTG+10 CTG+10 +10 +10 +10 +10 +10 672 ?  
!Leu+10 Thr+10 Ile+10 Phe+10 Ser+10 Pro+10 Thr+10 Ala+10 Ala+10 Leu+10 Se  
#r+10 Gly+10 Gln+10 Tyr+10 Leu+10 Leu ?  
!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 220 ?  
!+0  
!ACC+10 CTG+10 AAA+10 ATC+10 GGG+10 AGA+10 TTT+10 GCG+10 CAA+10 ACA+10 GC  
#T+10 CTC+10 GTA+10 ACT+10 CTA+10 GAA+10 +10 +10 +10 +10 +10 720 ?  
!Thr+10 Leu+10 Lys+10 Ile+10 Gly+10 Arg+10 Phe+10 Ala+10 Gln+10 Thr+10 Al  
#a+10 Leu+10 Val+10 Thr+10 Leu+10 Glu ?  
!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#40 ?  
!+0  
!GTT+10 AAC+10 GAT+10 CGC+10 TGT+10 TTA+10 AAG+10 ATC+10 GGG+10 TCG+10 CA  
#G+10 CTT+10 AAC+10 TTT+10 TTA+10 CCG+10 +10 +10 +10 +10 +10 768 ?  
!Val+10 Asn+10 Asp+10 Arg+10 Cys+10 Leu+10 Lys+10 Ile+10 Gly+10 Ser+10 Gl  
#n+10 Leu+10 Asn+10 Phe+10 Leu+10 Pro ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?  
!+0  
!TCG+10 AAA+10 TGC+10 TGG+10 ACA+10 ACA+10 GAA+10 CAG+10 TAT+10 CAG+10 AC  
#T+10 GGA+10 TTT+10 CAA+10 GGC+10 GAA+10 +10 +10 +10 +10 +10 816 ?  
!Ser+10 Lys+10 Cys+10 Trp+10 Thr+10 Thr+10 Glu+10 Gln+10 Tyr+10 Gln+10 Th  
#r+10 Gly+10 Phe+10 Gln+10 Gly+10 Glu ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?  
!+0  
!CAC+10 CTT+10 TAT+10 CCG+10 ATC+10 GCA+10 GAC+10 ACC+10 AAT+10 ACA+10 CG  
#A+10 CAC+10 GCG+10 GAC+10 GAC+10 GTA+10 +10 +10 +10 +10 +10 864 ?  
!His+10 Leu+10 Tyr+10 Pro+10 Ile+10 Ala+10 Asp+10 Thr+10 Asn+10 Thr+10 Ar  
#g+10 His+10 Ala+10 Asp+10 Asp+10 Val ?  
!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 285 ?  
!+0  
!TAT+10 CCG+10 GGA+10 TAC+10 GAA+10 GAT+10 ATT+10 CTG+10 CAG+10 CGC+10 TG  
#G+10 AAT+10 AAT+10 TTG+10 CTG+10 AGG+10 +10 +10 +10 +10 +10 912 ?  
!Tyr+10 Arg+10 Gly+10 Tyr+10 Glu+10 Asp+10 Ile+10 Leu+10 Gln+10 Arg+10 Tr  
#p+10 Asn+10 Asn+10 Leu+10 Leu+10 Arg ?  
!+10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 300 ?  
!+0  
!AAA+10 AAG+10 AAT+10 CCT+10 AGC+10 GCG+10 CCA+10 GAC+10 CCT+10 CGT+10 CC  
#A+10 GAT+10 AGC+10 GTC+10 CCG+10 CAA+10 +10 +10 +10 +10 +10 960 ?  
!Lys+10 Lys+10 Asn+10 Pro+10 Ser+10 Ala+10 Pro+10 Asp+10 Pro+10 Arg+10 Pr  
#o+10 Asp+10 Ser+10 Val+10 Pro+10 Gln ?  
!305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3  
#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3  
#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3  
#20 ?  
!+0  
!GAA+10 ATT+10 CCC+10 GCT+10 GTA+10 ACC+10 AAG+10 AAA+10 GCG+10 GAA+10 GG  
#G+10 CGC+10 ACC+10 CCG+10 GAC+10 GCA+10 +10 +10 +10 +10 1008 ?  
!Glu+10 Ile+10 Pro+10 Ala+10 Val+10 Thr+10 Lys+10 Lys+10 Ala+10 Glu+10 Gl  
#y+10 Arg+10 Thr+10 Pro+10 Asp+10 Ala ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335 ?  
!+0  
!GAA+10 AGC+10 AGC+10 GAA+10 AAG+10 AAG+10 GCC+10 CCT+10 CCA+10 GAA+10 GA  
#C+10 TCG+10 GAG+10 GAC+10 GAC+10 ATG+10 +10 +10 +10 +10 1056 ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

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PM

!Glu+10 Ser+10 Ser+10 Glu+10 Lys+10 Lys+10 Ala+10 Pro+10 Pro+10 Glu+10 As  
#p+10 Ser+10 Glu+10 Asp+10 Asp+10 Met ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?  
!+0  
!CAG+10 GCA+10 GAG+10 GCT+10 TCT+10 GGA+10 GAA+10 AAT+10 CCT+10 GCC+10 GC  
#C+10 CTC+10 CCC+10 GAA+10 GAC+10 GAC+10 +10 +10 +10 +10 1104 ?  
!Gln+10 Ala+10 Glu+10 Ala+10 Ser+10 Gly+10 Glu+10 Asn+10 Pro+10 Ala+10 Al  
#a+10 Leu+10 Pro+10 Glu+10 Asp+10 Asp ?  
!+10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 365 ?  
!+0  
!GAA+10 GTC+10 CCC+10 GAG+10 GAC+10 ACC+10 GAG+10 CAC+10 GAT+10 GAT+10 CC  
#A+10 AAC+10 TCG+10 GAT+10 CCT+10 GAC+10 +10 +10 +10 +10 1152 ?  
!Glu+10 Val+10 Pro+10 Glu+10 Asp+10 Thr+10 Glu+10 His+10 Asp+10 Asp+10 Pr  
#o+10 Asn+10 Ser+10 Asp+10 Pro+10 Asp ?  
!+10 +10 +10 +10 370+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 380 ?  
!+0  
!TAT+10 TAC+10 AAT+10 GAC+10 ATG+10 CCC+10 GCC+10 GTG+10 ATC+10 CCG+10 GT  
#G+10 GAG+10 GAG+10 ACT+10 ACT+10 AAA+10 +10 +10 +10 +10 1200 ?  
!Tyr+10 Tyr+10 Asn+10 Asp+10 Met+10 Pro+10 Ala+10 Val+10 Ile+10 Pro+10 Va  
#l+10 Glu+10 Glu+10 Thr+10 Thr+10 Lys ?  
!385+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3  
#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3  
#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4  
#00 ?  
!+0  
!AGT+10 TCT+10 AAT+10 GCC+10 GTC+10 TCC+10 ATG+10 CCC+10 ATA+10 TTC+10 GC  
#G+10 GCG+10 TTC+10 GTA+10 GCC+10 TGC+10 +10 +10 +10 +10 1248 ?  
!Ser+10 Ser+10 Asn+10 Ala+10 Val+10 Ser+10 Met+10 Pro+10 Ile+10 Phe+10 Al  
#a+10 Ala+10 Phe+10 Val+10 Ala+10 Cys ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 405+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415 ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34  
171 PM

!+0

!GCG+10 GTC+10 GCG+10 CTC+10 GTG+10 GGG+10 CTA+10 CTG+10 GTT+10 TGG+10 AG

#C+10 ATC+10 GTA+10 AAA+10 TGC+10 GCG+10 +10 +10 +10 +10 1296 ?

!Ala+10 Val+10 Ala+10 Leu+10 Val+10 Gly+10 Leu+10 Leu+10 Val+10 Trp+10 Se

#r+10 Ile+10 Val+10 Lys+10 Cys+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430 ?

!+0

!CGT+10 AGC+10 TAA+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 1305 ?

!Arg+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 435 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:11: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 434+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:11: ?

!+0

!Met+10 His+10 Arg+10 Pro+10 His+10 Leu+10 Arg+10 Arg+10 His+10 Ser+10 Ar

#g+10 Tyr+10 Tyr+10 Ala+10 Lys+10 Gly ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Glu+10 Val+10 Leu+10 Asn+10 Lys+10 His+10 Met+10 Asp+10 Cys+10 Gly+10 Gl

#y+10 Lys+10 Arg+10 Cys+10 Cys+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Gly+10 Ala+10 Ala+10 Val+10 Phe+10 Thr+10 Leu+10 Phe+10 Trp+10 Thr+10 Cy

#s+10 Val+10 Arg+10 Ile+10 Met+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Glu+10 His+10 Ile+10 Cys+10 Phe+10 Val+10 Arg+10 Asn+10 Ala+10 Met+10 As

#p+10 Arg+10 His+10 Leu+10 Phe+10 Leu ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Arg+10 Asn+10 Ala+10 Phe+10 Trp+10 Thr+10 Ile+10 Val+10 Leu+10 Leu+10 Se

#r+10 Ser+10 Phe+10 Ala+10 Ser+10 Gln ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Ser+10 Thr+10 Ala+10 Ala+10 Val+10 Thr+10 Tyr+10 Asp+10 Tyr+10 Ile+10 Le

#u+10 Gly+10 Arg+10 Arg+10 Ala+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Asp+10 Ala+10 Leu+10 Thr+10 Ile+10 Pro+10 Ala+10 Val+10 Gly+10 Pro+10 Ty

#r+10 Asn+10 Arg+10 Tyr+10 Leu+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Arg+10 Val+10 Ser+10 Arg+10 Gly+10 Cys+10 Asp+10 Val+10 Val+10 Glu+10 Le

#u+10 Asn+10 Pro+10 Ile+10 Ser+10 Asn ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10



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173

PM

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Val+10 Asp+10 Asp+10 Met+10 Ile+10 Ser+10 Ala+10 Ala+10 Lys+10 Glu+10 Ly

#s+10 Glu+10 Lys+10 Gly+10 Gly+10 Pro ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Phe+10 Glu+10 Ala+10 Ser+10 Val+10 Val+10 Trp+10 Phe+10 Tyr+10 Val+10 Il

#e+10 Lys+10 Gly+10 Asp+10 Asp+10 Gly ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Glu+10 Asp+10 Lys+10 Tyr+10 Cys+10 Pro+10 Ile+10 Tyr+10 Arg+10 Lys+10 Gl

#u+10 Tyr+10 Arg+10 Glu+10 Cys+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Asp+10 Val+10 Gln+10 Leu+10 Leu+10 Ser+10 Glu+10 Cys+10 Ala+10 Val+10 Gl

#n+10 Ser+10 Ala+10 Gln+10 Met+10 Trp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Ala+10 Val+10 Asp+10 Tyr+10 Val+10 Pro+10 Ser+10 Thr+10 Leu+10 Val+10 Se

#r+10 Arg+10 Asn+10 Gly+10 Ala+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Leu+10 Thr+10 Ile+10 Phe+10 Ser+10 Pro+10 Thr+10 Ala+10 Ala+10 Leu+10 Se

#r+10 Gly+10 Gln+10 Tyr+10 Leu+10 Leu ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Thr+10 Leu+10 Lys+10 Ile+10 Gly+10 Arg+10 Phe+10 Ala+10 Gln+10 Thr+10 Al

#a+10 Leu+10 Val+10 Thr+10 Leu+10 Glu ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Val+10 Asn+10 Asp+10 Arg+10 Cys+10 Leu+10 Lys+10 Ile+10 Gly+10 Ser+10 Gl

#n+10 Leu+10 Asn+10 Phe+10 Leu+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Ser+10 Lys+10 Cys+10 Trp+10 Thr+10 Thr+10 Glu+10 Gln+10 Tyr+10 Gln+10 Th

#r+10 Gly+10 Phe+10 Gln+10 Gly+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!His+10 Leu+10 Tyr+10 Pro+10 Ile+10 Ala+10 Asp+10 Thr+10 Asn+10 Thr+10 Ar

#g+10 His+10 Ala+10 Asp+10 Asp+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Tyr+10 Arg+10 Gly+10 Tyr+10 Glu+10 Asp+10 Ile+10 Leu+10 Gln+10 Arg+10 Tr

#p+10 Asn+10 Asn+10 Leu+10 Leu+10 Arg ?

!+10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 300 ?

!+0

!Lys+10 Lys+10 Asn+10 Pro+10 Ser+10 Ala+10 Pro+10 Asp+10 Pro+10 Arg+10 Pr

#o+10 Asp+10 Ser+10 Val+10 Pro+10 Gln ?

!305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#20 ?

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PM

!+0

!Glu+10 Ile+10 Pro+10 Ala+10 Val+10 Thr+10 Lys+10 Lys+10 Ala+10 Glu+10 Gl

#y+10 Arg+10 Thr+10 Pro+10 Asp+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335 ?

!+0

!Glu+10 Ser+10 Ser+10 Glu+10 Lys+10 Lys+10 Ala+10 Pro+10 Pro+10 Glu+10 As

#p+10 Ser+10 Glu+10 Asp+10 Asp+10 Met ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?

!+0

!Gln+10 Ala+10 Glu+10 Ala+10 Ser+10 Gly+10 Glu+10 Asn+10 Pro+10 Ala+10 Al

#a+10 Leu+10 Pro+10 Glu+10 Asp+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 365 ?

!+0

!Glu+10 Val+10 Pro+10 Glu+10 Asp+10 Thr+10 Glu+10 His+10 Asp+10 Asp+10 Pr

#o+10 Asn+10 Ser+10 Asp+10 Pro+10 Asp ?

!+10 +10 +10 +10 370+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 380 ?

!+0

!Tyr+10 Tyr+10 Asn+10 Asp+10 Met+10 Pro+10 Ala+10 Val+10 Ile+10 Pro+10 Va

#l+10 Glu+10 Glu+10 Thr+10 Thr+10 Lys ?

!385+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#00 ?

!+0

!Ser+10 Ser+10 Asn+10 Ala+10 Val+10 Ser+10 Met+10 Pro+10 Ile+10 Phe+10 Al

#a+10 Ala+10 Phe+10 Val+10 Ala+10 Cys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 405+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415 ?

!+0



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PM

!AAA+10 CTA+10 CCT+10 AAT+10 TCT+10 AGA+10 TTT+10 GAG+10 CTC+10 TCG+10 GA

#T+10 TCT+10 GGA+10 TGG+10 AAA+10 GAA+10 +10 +10 +10 +10 +10 +10 96 ?

!Lys+10 Leu+10 Pro+10 Asn+10 Ser+10 Arg+10 Phe+10 Glu+10 Leu+10 Ser+10 As

#p+10 Ser+10 Gly+10 Trp+10 Lys+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!TTG+10 GTT+10 CAC+10 GCA+10 GTG+10 AAA+10 ACT+10 ATG+10 GCG+10 AGT+10 TA

#C+10 GAT+10 CGT+10 CCG+10 AGT+10 ACA+10 +10 +10 +10 +10 +10 144 ?

!Leu+10 Val+10 His+10 Ala+10 Val+10 Lys+10 Thr+10 Met+10 Ala+10 Ser+10 Ty

#r+10 Asp+10 Arg+10 Pro+10 Ser+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!TTA+10 TCG+10 GTA+10 ATC+10 GTG+10 CGC+10 CCG+10 GCA+10 TCT+10 CTG+10 TA

#C+10 GAA+10 GTT+10 TCC+10 GGG+10 GAG+10 +10 +10 +10 +10 +10 192 ?

!Leu+10 Ser+10 Val+10 Ile+10 Val+10 Arg+10 Pro+10 Ala+10 Ser+10 Leu+10 Ty

#r+10 Glu+10 Val+10 Ser+10 Gly+10 Glu ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!CTG+10 TTT+10 TCC+10 CTT+10 CCC+10 AGG+10 ATG+10 TGC+10 AGA+10 CCC+10 GT

#G+10 ATT+10 CGG+10 TTC+10 GGT+10 GAG+10 +10 +10 +10 +10 +10 240 ?

!Leu+10 Phe+10 Ser+10 Leu+10 Pro+10 Arg+10 Met+10 Cys+10 Arg+10 Pro+10 Va

#l+10 Ile+10 Arg+10 Phe+10 Gly+10 Glu ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!GGG+10 GGC+10 GAC+10 CCG+10 CCT+10 GGA+10 GTA+10 AGT+10 CCC+10 GAG+10 TG

#G+10 AGC+10 GGC+10 TTG+10 GAC+10 GCA+10 +10 +10 +10 +10 +10 288 ?

!Gly+10 Gly+10 Asp+10 Pro+10 Pro+10 Gly+10 Val+10 Ser+10 Pro+10 Glu+10 Tr

#p+10 Ser+10 Gly+10 Leu+10 Asp+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?  
!+0  
!GGG+10 TTT+10 TAC+10 CAT+10 TTG+10 TCA+10 TCT+10 GGC+10 GCG+10 TAT+10 GC  
#C+10 GCA+10 AAA+10 GAG+10 TTC+10 CAT+10 +10 +10 +10 +10 +10 336 ?  
!Gly+10 Phe+10 Tyr+10 His+10 Leu+10 Ser+10 Ser+10 Gly+10 Ala+10 Tyr+10 Al  
#a+10 Ala+10 Lys+10 Glu+10 Phe+10 His ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?  
!+0  
!TTG+10 TGG+10 GTG+10 CTG+10 GGT+10 ACC+10 GCT+10 GAC+10 ATA+10 TGC+10 AT  
#G+10 GCA+10 GCT+10 TTA+10 AAC+10 CTC+10 +10 +10 +10 +10 +10 384 ?  
!Leu+10 Trp+10 Val+10 Leu+10 Gly+10 Thr+10 Ala+10 Asp+10 Ile+10 Cys+10 Me  
#t+10 Ala+10 Ala+10 Leu+10 Asn+10 Leu ?  
!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 125 ?  
!+0  
!CCT+10 GCG+10 CCA+10 AAA+10 ACT+10 TTC+10 CTA+10 ATT+10 ACC+10 GAA+10 AC  
#C+10 GGA+10 GGT+10 AAA+10 AAT+10 TTT+10 +10 +10 +10 +10 +10 432 ?  
!Pro+10 Ala+10 Pro+10 Lys+10 Thr+10 Phe+10 Leu+10 Ile+10 Thr+10 Glu+10 Th  
#r+10 Gly+10 Gly+10 Lys+10 Asn+10 Phe ?  
!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 140 ?  
!+0  
!GAG+10 AGA+10 GGA+10 GTG+10 GAA+10 ATA+10 TTT+10 TTG+10 GTA+10 AAC+10 GG  
#A+10 GAC+10 AAG+10 ACA+10 ACG+10 CTG+10 +10 +10 +10 +10 +10 480 ?  
!Glu+10 Arg+10 Gly+10 Val+10 Glu+10 Ile+10 Phe+10 Leu+10 Val+10 Asn+10 Gl  
#y+10 Asp+10 Lys+10 Thr+10 Thr+10 Leu ?  
!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1  
#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1  
#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1  
#60 ?  
!+0  
!TCT+10 CTG+10 AGT+10 CAC+10 CCA+10 TCA+10 GTC+10 TGG+10 ACA+10 ACT+10 CT  
#T+10 GCC+10 CCT+10 TCG+10 AGC+10 CTG+10 +10 +10 +10 +10 +10 528 ?

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PM

!Ser+10 Leu+10 Ser+10 His+10 Pro+10 Ser+10 Val+10 Trp+10 Thr+10 Thr+10 Le  
#u+10 Ala+10 Pro+10 Ser+10 Ser+10 Leu ?  
!  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?  
!  
!  
!AGA+10 ACG+10 CCC+10 TGG+10 CCG+10 TAC+10 AGC+10 ACG+10 GTA+10 AAG+10 TT  
#T+10 TTA+10 AAA+10 GTA+10 AAA+10 CCT+10 +10 +10 +10 +10 +10 576 ?  
!Arg+10 Thr+10 Pro+10 Trp+10 Pro+10 Tyr+10 Ser+10 Thr+10 Val+10 Lys+10 Ph  
#e+10 Leu+10 Lys+10 Val+10 Lys+10 Pro ?  
!  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?  
!  
!  
!AAC+10 TCG+10 GCC+10 GCA+10 TAC+10 TGT+10 GTT+10 TCC+10 GAC+10 TCG+10 GA  
#T+10 GAT+10 GGC+10 GAA+10 CGG+10 CAG+10 +10 +10 +10 +10 +10 624 ?  
!Asn+10 Ser+10 Ala+10 Ala+10 Tyr+10 Cys+10 Val+10 Ser+10 Asp+10 Ser+10 As  
#p+10 Asp+10 Gly+10 Glu+10 Arg+10 Gln ?  
!  
!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 205 ?  
!  
!  
!CCA+10 AAA+10 TTT+10 TTT+10 CTC+10 GGG+10 AGT+10 CTA+10 TTT+10 AAG+10 TC  
#G+10 AAG+10 AAA+10 CCC+10 CGC+10 TCC+10 +10 +10 +10 +10 +10 672 ?  
!Pro+10 Lys+10 Phe+10 Phe+10 Leu+10 Gly+10 Ser+10 Leu+10 Phe+10 Lys+10 Se  
#r+10 Lys+10 Lys+10 Pro+10 Arg+10 Ser ?  
!  
!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 220 ?  
!  
!  
!CCG+10 CGG+10 CGC+10 CGA+10 CGT+10 TA+10 G+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 690 ?  
!Pro+10 Arg+10 Arg+10 Arg+10 Arg ?  
!  
!225 ?  
!  
!  
!

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PM

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:13: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 229+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:13: ?

!+0

!Met+10 Ala+10 Pro+10 Val+10 Lys+10 Val+10 Thr+10 Ile+10 Val+10 Ser+10 Al

#a+10 Val+10 Asp+10 Ser+10 His+10 Tyr ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Lys+10 Leu+10 Pro+10 Asn+10 Ser+10 Arg+10 Phe+10 Glu+10 Leu+10 Ser+10 As

#p+10 Ser+10 Gly+10 Trp+10 Lys+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Leu+10 Val+10 His+10 Ala+10 Val+10 Lys+10 Thr+10 Met+10 Ala+10 Ser+10 Ty

#r+10 Asp+10 Arg+10 Pro+10 Ser+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Leu+10 Ser+10 Val+10 Ile+10 Val+10 Arg+10 Pro+10 Ala+10 Ser+10 Leu+10 Ty

#r+10 Glu+10 Val+10 Ser+10 Gly+10 Glu ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Leu+10 Phe+10 Ser+10 Leu+10 Pro+10 Arg+10 Met+10 Cys+10 Arg+10 Pro+10 Va

#l+10 Ile+10 Arg+10 Phe+10 Gly+10 Glu ?



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PM

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 80 ?

!+0

!Gly+10 Gly+10 Asp+10 Pro+10 Pro+10 Gly+10 Val+10 Ser+10 Pro+10 Glu+10 Tr  
#p+10 Ser+10 Gly+10 Leu+10 Asp+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Gly+10 Phe+10 Tyr+10 His+10 Leu+10 Ser+10 Ser+10 Gly+10 Ala+10 Tyr+10 Al  
#a+10 Ala+10 Lys+10 Glu+10 Phe+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Leu+10 Trp+10 Val+10 Leu+10 Gly+10 Thr+10 Ala+10 Asp+10 Ile+10 Cys+10 Me  
#t+10 Ala+10 Ala+10 Leu+10 Asn+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Pro+10 Ala+10 Pro+10 Lys+10 Thr+10 Phe+10 Leu+10 Ile+10 Thr+10 Glu+10 Th  
#r+10 Gly+10 Gly+10 Lys+10 Asn+10 Phe ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 140 ?

!+0

!Glu+10 Arg+10 Gly+10 Val+10 Glu+10 Ile+10 Phe+10 Leu+10 Val+10 Asn+10 Gl  
#y+10 Asp+10 Lys+10 Thr+10 Thr+10 Leu ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1  
#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1  
#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1  
#60 ?

!+0

!Ser+10 Leu+10 Ser+10 His+10 Pro+10 Ser+10 Val+10 Trp+10 Thr+10 Thr+10 Le  
#u+10 Ala+10 Pro+10 Ser+10 Ser+10 Leu ?

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PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Arg+10 Thr+10 Pro+10 Trp+10 Pro+10 Tyr+10 Ser+10 Thr+10 Val+10 Lys+10 Ph

#e+10 Leu+10 Lys+10 Val+10 Lys+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Asn+10 Ser+10 Ala+10 Ala+10 Tyr+10 Cys+10 Val+10 Ser+10 Asp+10 Ser+10 As

#p+10 Asp+10 Gly+10 Glu+10 Arg+10 Gln ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Pro+10 Lys+10 Phe+10 Phe+10 Leu+10 Gly+10 Ser+10 Leu+10 Phe+10 Lys+10 Se

#r+10 Lys+10 Lys+10 Pro+10 Arg+10 Ser ?

!+10 +10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Pro+10 Arg+10 Arg+10 Arg+10 Arg ?

!225 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:14: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH+10 381+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL+10 NO ?

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!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 1..380 ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:14: ?

!+0

!ATG+10 CGT+10 AGC+10 TCA+10 GTT+10 ACG+10 TCA+10 TTG+10 TGG+10 AGC+10 CC

#T+10 TCA+10 GAT+10 CAC+10 GCC+10 TCT+10 +10 +10 +10 +10 +10 +10 48 ?

!Met+10 Arg+10 Ser+10 Ser+10 Val+10 Thr+10 Ser+10 Leu+10 Trp+10 Ser+10 Pr

#o+10 Ser+10 Asp+10 His+10 Ala+10 Ser ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!TCG+10 CCC+10 GCA+10 AAT+10 GCC+10 AAG+10 CAT+10 TTT+10 TAT+10 CAT+10 AT

#T+10 TCC+10 GAT+10 TTC+10 CGG+10 CGC+10 +10 +10 +10 +10 +10 +10 96 ?

!Ser+10 Pro+10 Ala+10 Asn+10 Ala+10 Lys+10 His+10 Phe+10 Tyr+10 His+10 Il

#e+10 Ser+10 Asp+10 Phe+10 Arg+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!GCG+10 GAA+10 ACG+10 GCG+10 CCT+10 GCG+10 GGC+10 GGT+10 ACG+10 GGC+10 GC

#G+10 CGA+10 ACT+10 GAG+10 GTT+10 AAG+10 +10 +10 +10 +10 +10 +10 144 ?

!Ala+10 Glu+10 Thr+10 Ala+10 Pro+10 Ala+10 Gly+10 Gly+10 Thr+10 Gly+10 Al

#a+10 Arg+10 Thr+10 Glu+10 Val+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!CGT+10 CGC+10 GCT+10 TTC+10 ACT+10 TTC+10 CCA+10 GCG+10 GCA+10 GCG+10 GT

#A+10 CTC+10 AGC+10 GCA+10 ACT+10 GAA+10 +10 +10 +10 +10 +10 +10 192 ?

!Arg+10 Arg+10 Ala+10 Phe+10 Thr+10 Phe+10 Pro+10 Ala+10 Ala+10 Ala+10 Va

#l+10 Leu+10 Ser+10 Ala+10 Thr+10 Glu ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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PM

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!GCC+10 CGA+10 ACC+10 GGC+10 TCG+10 TCT+10 ATC+10 ACC+10 GGC+10 TTA+10 AA

#C+10 CGT+10 ACT+10 CCG+10 TCT+10 GCA+10 +10 +10 +10 +10 +10 240 ?

!Ala+10 Arg+10 Thr+10 Gly+10 Ser+10 Ser+10 Ile+10 Thr+10 Gly+10 Leu+10 As

#n+10 Arg+10 Thr+10 Pro+10 Ser+10 Ala ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!ATA+10 ATT+10 TCC+10 CTT+10 GCA+10 TGG+10 TCC+10 GAA+10 ATG+10 AGA+10 AA

#T+10 CTT+10 AAG+10 GAC+10 CCC+10 CTC+10 +10 +10 +10 +10 +10 288 ?

!Ile+10 Ile+10 Ser+10 Leu+10 Ala+10 Trp+10 Ser+10 Glu+10 Met+10 Arg+10 As

#n+10 Leu+10 Lys+10 Asp+10 Pro+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!GGG+10 TCC+10 CTG+10 TCG+10 CTG+10 GAA+10 ATA+10 GCT+10 TTA+10 ACG+10 AA

#T+10 GTC+10 TCT+10 AAC+10 TTT+10 TCC+10 +10 +10 +10 +10 +10 336 ?

!Gly+10 Ser+10 Leu+10 Ser+10 Leu+10 Glu+10 Ile+10 Ala+10 Leu+10 Thr+10 As

#n+10 Val+10 Ser+10 Asn+10 Phe+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!CTC+10 TTG+10 AGC+10 TCA+10 GAC+10 CCC+10 ATG+10 GCC+10 TTC+10 GAA+10 AA

#G+10 TCT+10 TCA+10 TAT+10 TG+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#380 ?

!Leu+10 Leu+10 Ser+10 Ser+10 Asp+10 Pro+10 Met+10 Ala+10 Phe+10 Glu+10 Ly

#s+10 Ser+10 Ser+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 125 ?

!+0

!A+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 381 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:15: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 126+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:15: ?

!+0

!Met+10 Arg+10 Ser+10 Ser+10 Val+10 Thr+10 Ser+10 Leu+10 Trp+10 Ser+10 Pr

#o+10 Ser+10 Asp+10 His+10 Ala+10 Ser ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Ser+10 Pro+10 Ala+10 Asn+10 Ala+10 Lys+10 His+10 Phe+10 Tyr+10 His+10 Il

#e+10 Ser+10 Asp+10 Phe+10 Arg+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Ala+10 Glu+10 Thr+10 Ala+10 Pro+10 Ala+10 Gly+10 Gly+10 Thr+10 Gly+10 Al

#a+10 Arg+10 Thr+10 Glu+10 Val+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Arg+10 Arg+10 Ala+10 Phe+10 Thr+10 Phe+10 Pro+10 Ala+10 Ala+10 Ala+10 Va

#l+10 Leu+10 Ser+10 Ala+10 Thr+10 Glu ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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PM

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Ala+10 Arg+10 Thr+10 Gly+10 Ser+10 Ser+10 Ile+10 Thr+10 Gly+10 Leu+10 As

#n+10 Arg+10 Thr+10 Pro+10 Ser+10 Ala ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Ile+10 Ile+10 Ser+10 Leu+10 Ala+10 Trp+10 Ser+10 Glu+10 Met+10 Arg+10 As

#n+10 Leu+10 Lys+10 Asp+10 Pro+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Gly+10 Ser+10 Leu+10 Ser+10 Leu+10 Glu+10 Ile+10 Ala+10 Leu+10 Thr+10 As

#n+10 Val+10 Ser+10 Asn+10 Phe+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Leu+10 Leu+10 Ser+10 Ser+10 Asp+10 Pro+10 Met+10 Ala+10 Phe+10 Glu+10 Ly

#s+10 Ser+10 Ser+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:16: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 879+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

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PM

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 1..878 ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:16: ?

!+0

!ATG+10 TGG+10 TGT+10 CGT+10 TTG+10 CAC+10 TGG+10 ATA+10 AGT+10 CCT+10 CG

#G+10 TTC+10 AGT+10 ATT+10 ATG+10 CGT+10 +10 +10 +10 +10 +10 +10 48 ?

!Met+10 Trp+10 Cys+10 Arg+10 Leu+10 His+10 Trp+10 Ile+10 Ser+10 Pro+10 Ar

#g+10 Phe+10 Ser+10 Ile+10 Met+10 Arg ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!CCC+10 GGT+10 TCC+10 CGA+10 ACT+10 GGT+10 AGG+10 GTT+10 TTG+10 CGA+10 GG

#C+10 CAG+10 GGG+10 TGT+10 GCT+10 CTG+10 +10 +10 +10 +10 +10 +10 96 ?

!Pro+10 Gly+10 Ser+10 Arg+10 Thr+10 Gly+10 Arg+10 Val+10 Leu+10 Arg+10 Gl

#y+10 Gln+10 Gly+10 Cys+10 Ala+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!TGC+10 AGT+10 TTC+10 TGG+10 CAT+10 CGT+10 ACT+10 CGA+10 ACT+10 CCG+10 AG

#T+10 ATA+10 AAC+10 CTC+10 CGG+10 TGC+10 +10 +10 +10 +10 +10 +10 144 ?

!Cys+10 Ser+10 Phe+10 Trp+10 His+10 Arg+10 Thr+10 Arg+10 Thr+10 Pro+10 Se

#r+10 Ile+10 Asn+10 Leu+10 Arg+10 Cys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!CGC+10 GCT+10 CGG+10 GGT+10 CTG+10 AGT+10 AAT+10 TTC+10 CGG+10 CTC+10 TG

#C+10 GCC+10 CAG+10 AGT+10 CCG+10 GGT+10 +10 +10 +10 +10 +10 +10 192 ?

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PM

!Arg+10 Ala+10 Arg+10 Gly+10 Leu+10 Ser+10 Asn+10 Phe+10 Arg+10 Leu+10 Cy

#s+10 Ala+10 Gln+10 Ser+10 Pro+10 Gly ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!GAA+10 AGG+10 CAC+10 AGG+10 TTC+10 GGT+10 ACT+10 CGG+10 ACT+10 CTG+10 AG

#T+10 CAA+10 CAC+10 CTC+10 CGG+10 CTC+10 +10 +10 +10 +10 +10 240 ?

!Glu+10 Arg+10 His+10 Arg+10 Phe+10 Gly+10 Thr+10 Arg+10 Thr+10 Leu+10 Se

#r+10 Gln+10 His+10 Leu+10 Arg+10 Leu ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!TGT+10 ACT+10 CGG+10 AGT+10 CTG+10 AGT+10 AGC+10 TTT+10 CGG+10 TAC+10 CG

#T+10 ACT+10 CGG+10 GGC+10 CTG+10 AGT+10 +10 +10 +10 +10 +10 288 ?

!Cys+10 Thr+10 Arg+10 Ser+10 Leu+10 Ser+10 Ser+10 Phe+10 Arg+10 Tyr+10 Ar

#g+10 Thr+10 Arg+10 Gly+10 Leu+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!GAA+10 AAA+10 GTG+10 TGT+10 TTC+10 AGT+10 ACT+10 CTG+10 AGT+10 TCG+10 CA

#T+10 AGT+10 GTC+10 CGG+10 CTC+10 GGC+10 +10 +10 +10 +10 +10 336 ?

!Glu+10 Lys+10 Val+10 Cys+10 Phe+10 Ser+10 Thr+10 Leu+10 Ser+10 Ser+10 Hi

#s+10 Ser+10 Val+10 Arg+10 Leu+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!ACT+10 CGA+10 AGT+10 CTG+10 AGT+10 AAA+10 GGC+10 CTC+10 AGT+10 TCC+10 CG

#C+10 GCT+10 CTG+10 AGT+10 CCG+10 AGT+10 +10 +10 +10 +10 +10 384 ?

!Thr+10 Arg+10 Ser+10 Leu+10 Ser+10 Lys+10 Gly+10 Leu+10 Ser+10 Ser+10 Ar

#g+10 Ala+10 Leu+10 Ser+10 Pro+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?



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PM

!+0

!AAA+10 AAT+10 CGC+10 CGG+10 TTC+10 AGT+10 ACT+10 CGA+10 ACT+10 CAG+10 AG

#T+10 AGT+10 TTT+10 CGG+10 TAC+10 CGT+10 +10 +10 +10 +10 +10 432 ?

!Lys+10 Asn+10 Arg+10 Arg+10 Phe+10 Ser+10 Thr+10 Arg+10 Thr+10 Gln+10 Se

#r+10 Ser+10 Phe+10 Arg+10 Tyr+10 Arg ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!GCT+10 CGG+10 GGT+10 CTG+10 AGT+10 AAA+10 CAC+10 CTC+10 CGT+10 TAC+10 CG

#T+10 ACT+10 CGA+10 ACT+10 CTG+10 TGT+10 +10 +10 +10 +10 +10 480 ?

!Ala+10 Arg+10 Gly+10 Leu+10 Ser+10 Lys+10 His+10 Leu+10 Arg+10 Tyr+10 Ar

#g+10 Thr+10 Arg+10 Thr+10 Leu+10 Cys ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!AAA+10 AAC+10 CTC+10 CGG+10 CGC+10 CGC+10 GCT+10 CGG+10 AGC+10 GCG+10 AG

#C+10 GGT+10 TTC+10 GGG+10 GGG+10 CGT+10 +10 +10 +10 +10 +10 528 ?

!Lys+10 Asn+10 Leu+10 Arg+10 Arg+10 Arg+10 Ala+10 Arg+10 Ser+10 Ala+10 Se

#r+10 Gly+10 Phe+10 Gly+10 Gly+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!GCT+10 ACG+10 AGA+10 CTG+10 AGT+10 AAA+10 TAT+10 CTC+10 GGG+10 TAT+10 CG

#T+10 GCT+10 CGG+10 GGT+10 CTG+10 GGC+10 +10 +10 +10 +10 +10 576 ?

!Ala+10 Thr+10 Arg+10 Leu+10 Ser+10 Lys+10 Tyr+10 Leu+10 Gly+10 Tyr+10 Ar

#g+10 Ala+10 Arg+10 Gly+10 Leu+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!AGG+10 TGC+10 CTC+10 GGT+10 TTC+10 TGC+10 ACC+10 CGG+10 AGT+10 CTG+10 AG

#T+10 AAA+10 AGT+10 CAT+10 CTG+10 TTC+10 +10 +10 +10 +10 +10 624 ?

!Arg+10 Cys+10 Leu+10 Gly+10 Phe+10 Cys+10 Thr+10 Arg+10 Ser+10 Leu+10 Se

#r+10 Lys+10 Ser+10 His+10 Leu+10 Phe ?

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PM

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!AGC+10 ACT+10 CGG+10 AGT+10 CTG+10 AGT+10 AAA+10 CAA+10 CGC+10 CTC+10 CG

#T+10 TTC+10 TGC+10 GAT+10 CTG+10 CGT+10 +10 +10 +10 +10 +10 672 ?

!Ser+10 Thr+10 Arg+10 Ser+10 Leu+10 Ser+10 Lys+10 Gln+10 Arg+10 Leu+10 Ar

#g+10 Phe+10 Cys+10 Asp+10 Leu+10 Arg ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!CTG+10 AGT+10 AAG+10 AGC+10 CGC+10 CTG+10 TTC+10 AGT+10 ACT+10 CGG+10 AG

#T+10 CTG+10 AGT+10 AAA+10 ATA+10 CCA+10 +10 +10 +10 +10 +10 720 ?

!Leu+10 Ser+10 Lys+10 Ser+10 Arg+10 Leu+10 Phe+10 Ser+10 Thr+10 Arg+10 Se

#r+10 Leu+10 Ser+10 Lys+10 Ile+10 Pro ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!CGG+10 TTC+10 CTG+10 ACT+10 CTG+10 GGA+10 CCG+10 CGC+10 GGT+10 TTC+10 CG

#A+10 CTC+10 GGT+10 ACT+10 CGG+10 ACT+10 +10 +10 +10 +10 +10 768 ?

!Arg+10 Phe+10 Leu+10 Thr+10 Leu+10 Gly+10 Pro+10 Arg+10 Gly+10 Phe+10 Ar

#g+10 Leu+10 Gly+10 Thr+10 Arg+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!CTG+10 AGT+10 AAA+10 GAC+10 CAC+10 CGT+10 TTC+10 TGC+10 ACT+10 CTG+10 GG

#T+10 CTG+10 TGT+10 AGT+10 TTC+10 ATG+10 +10 +10 +10 +10 +10 816 ?

!Leu+10 Ser+10 Lys+10 Asp+10 His+10 Arg+10 Phe+10 Cys+10 Thr+10 Leu+10 Gl

#y+10 Leu+10 Cys+10 Ser+10 Phe+10 Met ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!TGC+10 CGC+10 GCT+10 CGG+10 GGT+10 CTC+10 GGT+10 AGA+10 AAT+10 CCC+10 CG

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PM

#G+10 CGC+10 GGT+10 CGT+10 AGG+10 AAA+10 +10 +10 +10 +10 +10 864 ?

!Cys+10 Arg+10 Ala+10 Arg+10 Gly+10 Leu+10 Gly+10 Arg+10 Asn+10 Pro+10 Ar

#g+10 Arg+10 Gly+10 Arg+10 Arg+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!CAG+10 TGT+10 ATT+10 TTC+10 TG+10 A+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 879 ?

!Gln+10 Cys+10 Ile+10 Phe ?

!+10 +10 +10 +10 290 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:17: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 292+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:17: ?

!+0

!Met+10 Trp+10 Cys+10 Arg+10 Leu+10 His+10 Trp+10 Ile+10 Ser+10 Pro+10 Ar

#g+10 Phe+10 Ser+10 Ile+10 Met+10 Arg ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Pro+10 Gly+10 Ser+10 Arg+10 Thr+10 Gly+10 Arg+10 Val+10 Leu+10 Arg+10 Gl

#y+10 Gln+10 Gly+10 Cys+10 Ala+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

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PM

!+0

!Cys+10 Ser+10 Phe+10 Trp+10 His+10 Arg+10 Thr+10 Arg+10 Thr+10 Pro+10 Se  
#r+10 Ile+10 Asn+10 Leu+10 Arg+10 Cys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Arg+10 Ala+10 Arg+10 Gly+10 Leu+10 Ser+10 Asn+10 Phe+10 Arg+10 Leu+10 Cy  
#s+10 Ala+10 Gln+10 Ser+10 Pro+10 Gly ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 60 ?

!+0

!Glu+10 Arg+10 His+10 Arg+10 Phe+10 Gly+10 Thr+10 Arg+10 Thr+10 Leu+10 Se  
#r+10 Gln+10 His+10 Leu+10 Arg+10 Leu ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 80 ?

!+0

!Cys+10 Thr+10 Arg+10 Ser+10 Leu+10 Ser+10 Ser+10 Phe+10 Arg+10 Tyr+10 Ar  
#g+10 Thr+10 Arg+10 Gly+10 Leu+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Glu+10 Lys+10 Val+10 Cys+10 Phe+10 Ser+10 Thr+10 Leu+10 Ser+10 Ser+10 Hi  
#s+10 Ser+10 Val+10 Arg+10 Leu+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Thr+10 Arg+10 Ser+10 Leu+10 Ser+10 Lys+10 Gly+10 Leu+10 Ser+10 Ser+10 Ar  
#g+10 Ala+10 Leu+10 Ser+10 Pro+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

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PM

!Lys+10 Asn+10 Arg+10 Arg+10 Phe+10 Ser+10 Thr+10 Arg+10 Thr+10 Gln+10 Se

#r+10 Ser+10 Phe+10 Arg+10 Tyr+10 Arg ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Ala+10 Arg+10 Gly+10 Leu+10 Ser+10 Lys+10 His+10 Leu+10 Arg+10 Tyr+10 Ar

#g+10 Thr+10 Arg+10 Thr+10 Leu+10 Cys ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Lys+10 Asn+10 Leu+10 Arg+10 Arg+10 Arg+10 Ala+10 Arg+10 Ser+10 Ala+10 Se

#r+10 Gly+10 Phe+10 Gly+10 Gly+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Ala+10 Thr+10 Arg+10 Leu+10 Ser+10 Lys+10 Tyr+10 Leu+10 Gly+10 Tyr+10 Ar

#g+10 Ala+10 Arg+10 Gly+10 Leu+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Arg+10 Cys+10 Leu+10 Gly+10 Phe+10 Cys+10 Thr+10 Arg+10 Ser+10 Leu+10 Se

#r+10 Lys+10 Ser+10 His+10 Leu+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Ser+10 Thr+10 Arg+10 Ser+10 Leu+10 Ser+10 Lys+10 Gln+10 Arg+10 Leu+10 Ar

#g+10 Phe+10 Cys+10 Asp+10 Leu+10 Arg ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Leu+10 Ser+10 Lys+10 Ser+10 Arg+10 Leu+10 Phe+10 Ser+10 Thr+10 Arg+10 Se

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PM

#r+10 Leu+10 Ser+10 Lys+10 Ile+10 Pro ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Arg+10 Phe+10 Leu+10 Thr+10 Leu+10 Gly+10 Pro+10 Arg+10 Gly+10 Phe+10 Ar

#g+10 Leu+10 Gly+10 Thr+10 Arg+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Leu+10 Ser+10 Lys+10 Asp+10 His+10 Arg+10 Phe+10 Cys+10 Thr+10 Leu+10 Gl

#y+10 Leu+10 Cys+10 Ser+10 Phe+10 Met ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Cys+10 Arg+10 Ala+10 Arg+10 Gly+10 Leu+10 Gly+10 Arg+10 Asn+10 Pro+10 Ar

#g+10 Arg+10 Gly+10 Arg+10 Arg+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Gln+10 Cys+10 Ile+10 Phe ?

!+10 +10 +10 +10 290 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:18: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 534+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 1..533 ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:18: ?

!+0

!ATG+10 CTC+10 CCA+10 AGC+10 CTA+10 CTC+10 AAC+10 AGG+10 GGC+10 TCT+10 CC

#C+10 CGG+10 CTG+10 AAT+10 TCT+10 CCT+10 +10 +10 +10 +10 +10 +10 48 ?

!Met+10 Leu+10 Pro+10 Ser+10 Leu+10 Leu+10 Asn+10 Arg+10 Gly+10 Ser+10 Pr

#o+10 Arg+10 Leu+10 Asn+10 Ser+10 Pro ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!CCT+10 AAG+10 TGT+10 TCA+10 GAG+10 GCC+10 TCT+10 GCT+10 GTA+10 CCA+10 TA

#T+10 AAC+10 TAT+10 CGT+10 GTA+10 GTA+10 +10 +10 +10 +10 +10 +10 96 ?

!Pro+10 Lys+10 Cys+10 Ser+10 Glu+10 Ala+10 Ser+10 Ala+10 Val+10 Pro+10 Ty

#r+10 Asn+10 Tyr+10 Arg+10 Val+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!CGC+10 CCC+10 TCC+10 CAG+10 TCC+10 GTG+10 TCC+10 GAT+10 ACT+10 GCC+10 CC

#T+10 TTT+10 GAG+10 AGG+10 ATT+10 GGG+10 +10 +10 +10 +10 +10 +10 144 ?

!Arg+10 Pro+10 Ser+10 Gln+10 Ser+10 Val+10 Ser+10 Asp+10 Thr+10 Ala+10 Pr

#o+10 Phe+10 Glu+10 Arg+10 Ile+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!AGA+10 TTA+10 GAG+10 AAT+10 CGA+10 AAT+10 GAT+10 TGG+10 AGA+10 GCC+10 AC

#A+10 TTC+10 AGA+10 CTT+10 AAT+10 CAC+10 +10 +10 +10 +10 +10 +10 192 ?

!Arg+10 Leu+10 Glu+10 Asn+10 Arg+10 Asn+10 Asp+10 Trp+10 Arg+10 Ala+10 Th

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PM

#r+10 Phe+10 Arg+10 Leu+10 Asn+10 His ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!ATT+10 TTT+10 ATT+10 GAG+10 TCG+10 GGC+10 GAG+10 CTT+10 AGC+10 GCA+10 GA

#C+10 GGG+10 TTA+10 ACA+10 ATC+10 GCA+10 +10 +10 +10 +10 +10 240 ?

!Ile+10 Phe+10 Ile+10 Glu+10 Ser+10 Gly+10 Glu+10 Leu+10 Ser+10 Ala+10 As

#p+10 Gly+10 Leu+10 Thr+10 Ile+10 Ala ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!ACC+10 AGT+10 TCC+10 ACA+10 AGT+10 TCA+10 CTA+10 TCC+10 TGG+10 TCA+10 GC

#G+10 CCC+10 TTG+10 TTT+10 ATT+10 TCG+10 +10 +10 +10 +10 +10 288 ?

!Thr+10 Ser+10 Ser+10 Thr+10 Ser+10 Ser+10 Leu+10 Ser+10 Trp+10 Ser+10 Al

#a+10 Pro+10 Leu+10 Phe+10 Ile+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!CAC+10 GCA+10 ACC+10 ATG+10 GGT+10 CCA+10 AAT+10 TTT+10 CGC+10 GAT+10 TC

#C+10 CTT+10 CTA+10 GTT+10 TGG+10 GAA+10 +10 +10 +10 +10 +10 336 ?

!His+10 Ala+10 Thr+10 Met+10 Gly+10 Pro+10 Asn+10 Phe+10 Arg+10 Asp+10 Se

#r+10 Leu+10 Leu+10 Val+10 Trp+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!CGT+10 TCT+10 TCG+10 TCG+10 TCT+10 TGC+10 GAG+10 ACC+10 GTG+10 TCT+10 AA

#T+10 TTT+10 CGG+10 TGC+10 GGG+10 GTG+10 +10 +10 +10 +10 +10 384 ?

!Arg+10 Ser+10 Ser+10 Ser+10 Ser+10 Cys+10 Glu+10 Thr+10 Val+10 Ser+10 As

#n+10 Phe+10 Arg+10 Cys+10 Gly+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0



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PM

!CAC+10 ATG+10 TTT+10 CTG+10 GTG+10 ACG+10 ATG+10 GAA+10 ATT+10 ACA+10 AT  
#G+10 ACG+10 AGG+10 CCG+10 ATC+10 GTT+10 +10 +10 +10 +10 +10 432 ?  
!His+10 Met+10 Phe+10 Leu+10 Val+10 Thr+10 Met+10 Glu+10 Ile+10 Thr+10 Me  
#t+10 Thr+10 Arg+10 Pro+10 Ile+10 Val ?  
!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 140 ?  
!+0  
!GCG+10 CTC+10 ACG+10 ACG+10 GCA+10 GCC+10 ACG+10 GTT+10 ACC+10 CCA+10 AT  
#T+10 AGC+10 GTA+10 GGG+10 CTC+10 ATT+10 +10 +10 +10 +10 +10 480 ?  
!Ala+10 Leu+10 Thr+10 Thr+10 Ala+10 Ala+10 Thr+10 Val+10 Thr+10 Pro+10 Il  
#e+10 Ser+10 Val+10 Gly+10 Leu+10 Ile ?  
!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1  
#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1  
#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1  
#60 ?  
!+0  
!GTC+10 CCG+10 AGA+10 CGG+10 ACA+10 GTA+10 ACG+10 TTT+10 GAA+10 TTT+10 TC  
#G+10 TTT+10 GCG+10 GGT+10 GTC+10 GGT+10 +10 +10 +10 +10 +10 528 ?  
!Val+10 Pro+10 Arg+10 Arg+10 Thr+10 Val+10 Thr+10 Phe+10 Glu+10 Phe+10 Se  
#r+10 Phe+10 Ala+10 Gly+10 Val+10 Gly ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?  
!+0  
!TCG+10 TA+10 A+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 534 ?  
!Ser ?  
!+0  
!+0  
!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:19: ?  
!+0  
!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 177+10 amino+10  
#acids ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

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PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:19: ?

!+0

!Met+10 Leu+10 Pro+10 Ser+10 Leu+10 Leu+10 Asn+10 Arg+10 Gly+10 Ser+10 Pr

#o+10 Arg+10 Leu+10 Asn+10 Ser+10 Pro ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Pro+10 Lys+10 Cys+10 Ser+10 Glu+10 Ala+10 Ser+10 Ala+10 Val+10 Pro+10 Ty

#r+10 Asn+10 Tyr+10 Arg+10 Val+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Arg+10 Pro+10 Ser+10 Gln+10 Ser+10 Val+10 Ser+10 Asp+10 Thr+10 Ala+10 Pr

#o+10 Phe+10 Glu+10 Arg+10 Ile+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Arg+10 Leu+10 Glu+10 Asn+10 Arg+10 Asn+10 Asp+10 Trp+10 Arg+10 Ala+10 Th

#r+10 Phe+10 Arg+10 Leu+10 Asn+10 His ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Ile+10 Phe+10 Ile+10 Glu+10 Ser+10 Gly+10 Glu+10 Leu+10 Ser+10 Ala+10 As

#p+10 Gly+10 Leu+10 Thr+10 Ile+10 Ala ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Thr+10 Ser+10 Ser+10 Thr+10 Ser+10 Ser+10 Leu+10 Ser+10 Trp+10 Ser+10 Al

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PM

#a+10 Pro+10 Leu+10 Phe+10 Ile+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!His+10 Ala+10 Thr+10 Met+10 Gly+10 Pro+10 Asn+10 Phe+10 Arg+10 Asp+10 Se

#r+10 Leu+10 Leu+10 Val+10 Trp+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Arg+10 Ser+10 Ser+10 Ser+10 Ser+10 Cys+10 Glu+10 Thr+10 Val+10 Ser+10 As

#n+10 Phe+10 Arg+10 Cys+10 Gly+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!His+10 Met+10 Phe+10 Leu+10 Val+10 Thr+10 Met+10 Glu+10 Ile+10 Thr+10 Me

#t+10 Thr+10 Arg+10 Pro+10 Ile+10 Val ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Ala+10 Leu+10 Thr+10 Thr+10 Ala+10 Ala+10 Thr+10 Val+10 Thr+10 Pro+10 Il

#e+10 Ser+10 Val+10 Gly+10 Leu+10 Ile ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Val+10 Pro+10 Arg+10 Arg+10 Thr+10 Val+10 Thr+10 Phe+10 Glu+10 Phe+10 Se

#r+10 Phe+10 Ala+10 Gly+10 Val+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Ser ?

!+0

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200 PM

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:20: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 48+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:20: ?

!+0

!GAATTCGAGC+10 TCGGTACCCG+10 GATAATACGT+10 ACATGTTAAC+10 GCAGAGGT+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 48 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:21: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 36+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:21: ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34  
201 PM

!+0

!GCTGACCGCT+10 AGTCGACCTG+10 CAGTGAATAA+10 TAAAAT+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 36 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:22: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 48+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:22: ?

!+0

!TGTCGTCGA+10 GATCCTCTAG+10 AGTCGACGAA+10 AGGTCAGAGA+10 CGATGCCC+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 48 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:23: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 38+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

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202

PM

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:23: ?

!+0

!CGGATCAGAA+10 ACTCTTTTCGG+10 TACCCGGGAT+10 CCTCTAGA+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 38 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:24: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 33+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:24: ?

!+0

!GAATACAAGC+10 TTAGATGCAT+10 ATTTACTCGA+10 GCC+10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 33 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:25: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 51+10 base+10

#pairs ?

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203

PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:25: ?

!+0

!GGTTTGGCGG+10 AGCGGATATG+10 ATCTCGACCT+10 GCAGTGAATA+10 ATAAATGTG+10 T+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 51 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:26: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 48+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:26: ?

!+0

!TGTCGTCGA+10 GATCCTCTAG+10 AGTCGAGATC+10 AGCAAAATGT+10 TCACGGGG+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 48 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:27: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 18+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:27: ?

!+0

!AAGCTTGGCG+10 TAATCATG+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 18 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:28: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 39+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:28: ?



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205 PM

!+0

!GGAATTCGAG+10 CTCGGTACCT+10 CGTGGCGAGC+10 GCAGGCGGC+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 39 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:29: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 51+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:29: ?

!+0

!GGCCGAGTTA+10 GGTTTACTT+10 TTCTAGAGGA+10 TCCCCTCGAC+10 GTCTGGGGCG+10 C+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 51 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:30: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 48+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0



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PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:32: ?

!+0

!GAATTCGAGC+10 TCGGTACCGA+10 AAGCTACTCA+10 GAC+10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 33 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:33: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 42+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:33: ?

!+0

!CGCAAACAGC+10 TCTCGTAACT+10 CTAGAAGTTA+10 ACGATCGCTG+10 TT+10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 42 ?

!+0

!+0

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PM

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:34: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 57+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:34: ?

!+0

!GAATAGCATA+10 CCAATGCCTA+10 TTCATTGGGA+10 CTCGACTCTA+10 GAGGATCCCC+10 GG

#GAACG+10 +10 +10 +10 +10 +10 +10 +10 57 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:35: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 42+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:35: ?

!+0

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PM

!TCGAGGGGAT+10 CCTCTAGAGT+10 CGAGGGACCC+10 ATGGTTGCGT+10 GC+10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 42 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:36: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 42+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:36: ?

!+0

!TTTACTAAAG+10 CGCGGCGAAA+10 GCTTCGTCGT+10 GCTGGGTCT+10 GG+10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 42 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:37: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 21+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

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210

PM

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:37: ?

!+0

!AAGCTTGCG+10 TAATCATGGT+10 C+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#21 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:38: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 48+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:38: ?

!+0

!GGAATTCGAG+10 CTCGGTACCC+10 GGATAATACG+10 TACATGTTAA+10 CGCAGAGG+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 48 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:39: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 45+10 base+10

#pairs ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

211

PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:39: ?

!+0

!ATCTATTGGA+10 GCGTTTAGCG+10 CGCGTCGACG+10 AAAGGTCAGA+10 GACGA+10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#45 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:40: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 27+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:40: ?

!+0

!CTGCTTCATT+10 TCTGATCCCC+10 GGGAACG+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 27 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:41: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 51+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:41: ?

!+0

!ACCACCCCG+10 CGCCCCAGAC+10 GTCGAGGGGA+10 TCAATTATTG+10 CGTATTGAAT+10 A+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 51 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:42: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 33+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:42: ?



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!+0

!ATCAGAAACT+10 CTTTCGGTAC+10 CGAGCTCGAA+10 TTC+10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 33 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:43: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 48+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:43: ?

!+0

!GAATTTCGAGC+10 TCGGTACCCG+10 GATAATACGT+10 ACATGTTAAC+10 GCAGAGGT+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 48 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:44: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 33+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

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214

PM

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:44: ?

!+0

!GCTGACCGCT+10 AGTCGACTCT+10 AGAGGATCCC+10 CTC+10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 33 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:45: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 42+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:45: ?

!+0

!CGTTCCTCCGGG+10 GATCCTCTAG+10 AGTCGACGGC+10 AGAGTCGCAG+10 AC+10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 42 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:46: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 30+10 base+10

#pairs ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

215

PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:46: ?

!+0

!TGATCCAAAC+10 TCGGATCCTC+10 TAGAGTCGAC+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:47: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 48+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:47: ?

!+0

!AAGCTTGGGC+10 TGCAGGTCGA+10 CTCTAGAGGA+10 TCCCCTCGAC+10 GTCTGGGG+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 48 ?

!+0

!+0

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216

PM

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:48: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 60+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:48: ?

!+0

!CACACCTTTG+10 CGCATCTCCA+10 CAGCTCAACA+10 ATGAATCCA+10 TGTTACGTCC+10 TG

#TAGAAACC+10 +10 +10 +10 +10 60 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:49: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 60+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:49: ?

!+0

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

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PM

!CAGGGAGGCA+10 AACAAATGAAT+10 CAACAACCTCT+10 CCCGGGAGAT+10 GGGGGAGGCT+10 AA

#CTGAAACA+10 +10 +10 +10 +10 60 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:50: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 45+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:50: ?

!+0

!TGCTGCGTTC+10 CCGGGGATCC+10 TCTAGAGTCG+10 ACCTGCAGCC+10 CAAGC+10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#45 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:51: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 48+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?



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219

PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:53: ?

!+0

!TCGCGCGAAA+10 TCCAGCTGAG+10 CGCCGGTCGC+10 TACCATTACC+10 AGTTGGTCTG+10 GT

#GTCAAAAA+10 +10 +10 +10 +10 60 ?

!+0

!GATCTAGAAT+10 AAGCTAGAGG+10 ATCGATCCCC+10 TATGGCGATC+10 ATCAG+10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:54: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 36+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 NO ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 NO ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:54: ?

!+0

!CCGTCGAGAT+10 CCTCTAGAGT+10 CGACCTGCAG+10 GTCGAC+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 36 ?

!+0

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34  
220 PM

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:55: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 20+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 N ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 N ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:55: ?

!+0

!CCTAGCACCC+10 TTGTATCGCG+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 20 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:56: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 29+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 N ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 N ?



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PM

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:56: ?

!+0

!CGCCTCGAGT+10 CCCAATGAAT+10 AGGCATTGG+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 29 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:57: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 27+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 DNA+10 (genomic) ?

!+0

!+10 +10 +10 (iii)+10 HYPOTHETICAL:+10 N ?

!+0

!+10 +10 +10 +10 (iv)+10 ANTI-SENSE:+10 N ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:57: ?

!+0

!CGCCTCGAGG+10 ACCCATGGTT+10 GCGTGCG+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 27 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:58: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 20+10 base+10

#pairs ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 nucleic+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (C)+10 STRANDEDNESS:+10 single ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?



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PM

#(1900..2784) ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 OTHER+10 INFORMATION: ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 complement+10

#(2916..3605) ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 OTHER+10 INFORMATION: ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 3694..5124 ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 OTHER+10 INFORMATION: ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 5210..7081 ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 OTHER+10 INFORMATION: ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 7245..8123 ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 OTHER+10 INFORMATION: ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 8333..11290 ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 OTHER+10 INFORMATION: ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 11098..12402 ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 OTHER+10 INFORMATION: ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 12510..13598 ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 OTHER+10 INFORMATION: ?

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!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 13792..15291 ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 OTHER+10 INFORMATION: ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 15298..16080 ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 OTHER+10 INFORMATION: ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 16129..17013 ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 OTHER+10 INFORMATION: ?

!+0

!+10 +10 +10 +10 (ix)+10 FEATURE: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 NAME/KEY:+10 CDS ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 LOCATION:+10 complement+10

#(17380..18216) ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 OTHER+10 INFORMATION: ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:59: ?

!+0

!GGATCCCGAA+10 GAGCTCTCCC+10 AGAAGTTTTT+10 CTTTTCGGAC+10 GTATCGGAGG+10 AC

#GAAGAACC+10 +10 +10 +10 +10 60 ?

!+0

!GGCACGCGGG+10 AGGAGCTGGA+10 GCGACCCGGA+10 GTCGGAGGAA+10 GAGCAGCCTG+10 GG

#TGCCGGGG+10 +10 +10 +10 120 ?

!+0

!AGTGGACTTG+10 GGCGAGGAGG+10 ACACGGGACA+10 CAGCTCCACC+10 GAGTCAGAGC+10 CC

#ACGCAATC+10 +10 +10 +10 180 ?

!+0

!TGACTTAGAC+10 TTTATTGACG+10 ACAGCTCTCC+10 GGCGCCGCCG+10 CCATTTGCTA+10 TC

#CCCCGCGT+10 +10 +10 +10 240 ?

!+0

!CCGTGCGTTA+10 TTGCGGTGCG+10 CGGCACCCGC+10 AAAGACCCAC+10 GGAAGGCTTC+10 GG

#CCGCCAGG+10 +10 +10 +10 300 ?

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!+0

!GCGGGTAGGC+10 GCACTCTTAA+10 AAGACGGAGG+10 TTGTCATTTT+10 CTTCTTCCTC+10 TG  
#ACGAGGAA+10 +10 +10 +10 360 ?

!+0

!TCCGAGGAGA+10 GAAGTAAAAA+10 AGAAGAAGCG+10 GCCTCGACCC+10 CTGCACGGCG+10 AC  
#GCAAGGCC+10 +10 +10 +10 420 ?

!+0

!GAGGCCTCGA+10 CGAGCAGATA+10 GAGGAGACGC+10 GGGGCAGAAC+10 CTCCCCCTCC+10 CT  
#CCCACCCC+10 +10 +10 +10 480 ?

!+0

!CCTACTCTGG+10 ACATTTATTG+10 CCCGCTCGAT+10 CCATTCTCAT+10 CCAGAACTTC+10 TT  
#TCCCCTC+10 +10 +10 +10 540 ?

!+0

!AGCCTTCACG+10 CAGAAGCGGA+10 CGCGCGCCCC+10 TTTGCGACCG+10 CCGGACATCC+10 CG  
#CCGCCCCC+10 +10 +10 +10 600 ?

!+0

!CCCCCTTCAC+10 GCCCGGCGCA+10 ATCCGTAGCC+10 GTCCAACTCG+10 GCCCAGCACA+10 AC  
#CGCAGTAG+10 +10 +10 +10 660 ?

!+0

!ACCGCCCGGA+10 CCGCTCTCCT+10 CTAGACACAT+10 CCCTAA+10 ATG+10 GAA+10 AAC+10  
#ATG+10 CTC+10 GAC+10 +10 +10 +10 +10 +10 714 ?

!+0

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 Met+10 Glu+10 Asn+10 Met+10 Leu+10 Asp ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 5 ?

!+0

!GGG+10 TGC+10 TAC+10 CCG+10 CTG+10 GCG+10 CTG+10 ATG+10 GAC+10 AGC+10 GA  
#T+10 CAC+10 ATT+10 ACT+10 GCG+10 CAC+10 +10 +10 +10 +10 762 ?

!Gly+10 Cys+10 Tyr+10 Pro+10 Leu+10 Ala+10 Leu+10 Met+10 Asp+10 Ser+10 As  
#p+10 His+10 Ile+10 Thr+10 Ala+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20 ?

!+0



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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100 ?

!+0

!GGC+10 CTA+10 GGT+10 TTG+10 AGG+10 CCG+10 CGG+10 TGG+10 GCG+10 TCG+10 AC

#G+10 GAG+10 AGC+10 GTC+10 GCC+10 AAC+10 +10 +10 +10 1050 ?

!Gly+10 Leu+10 Gly+10 Leu+10 Arg+10 Pro+10 Arg+10 Trp+10 Ala+10 Ser+10 Th

#r+10 Glu+10 Ser+10 Val+10 Ala+10 Asn ?

!+10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 110+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 115 ?

!+0

!TCC+10 CCC+10 ACT+10 GAC+10 CCG+10 AAT+10 AAC+10 GGC+10 AAC+10 GGG+10 TT

#G+10 GGA+10 GAA+10 TTA+10 GAG+10 GAG+10 +10 +10 +10 1098 ?

!Ser+10 Pro+10 Thr+10 Asp+10 Pro+10 Asn+10 Asn+10 Gly+10 Asn+10 Gly+10 Le

#u+10 Gly+10 Glu+10 Leu+10 Glu+10 Glu ?

!+10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 125+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 130 ?

!+0

!GCA+10 ATG+10 GAA+10 GGG+10 ATC+10 GAG+10 GGC+10 GAT+10 TTC+10 TGG+10 CT

#C+10 GAC+10 TCT+10 CTG+10 GAC+10 GGT+10 +10 +10 +10 1146 ?

!Ala+10 Met+10 Glu+10 Gly+10 Ile+10 Glu+10 Gly+10 Asp+10 Phe+10 Trp+10 Le

#u+10 Asp+10 Ser+10 Leu+10 Asp+10 Gly ?

!135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#40+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#45+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50 ?

!+0

!GAC+10 CGC+10 TTC+10 GAG+10 GAC+10 GAG+10 AGC+10 CGT+10 ACC+10 ATG+10 CA

#G+10 AGC+10 GAG+10 AAT+10 ATG+10 CGT+10 +10 +10 +10 1194 ?

!Asp+10 Arg+10 Phe+10 Glu+10 Asp+10 Glu+10 Ser+10 Arg+10 Thr+10 Met+10 Gl

#n+10 Ser+10 Glu+10 Asn+10 Met+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 155+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 160+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165 ?

!+0

!TTC+10 GTG+10 ATC+10 GAG+10 AAA+10 GAA+10 CTG+10 TTA+10 TCC+10 TGG+10 CT

#G+10 TCC+10 CGA+10 CAC+10 CTG+10 CCG+10 +10 +10 +10 1242 ?

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PM

!Phe+10 Val+10 Ile+10 Glu+10 Lys+10 Glu+10 Leu+10 Leu+10 Ser+10 Trp+10 Le  
#u+10 Ser+10 Arg+10 His+10 Leu+10 Pro ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180 ?  
!+0  
!GCC+10 GAC+10 CTC+10 GCG+10 TCC+10 GCC+10 GAG+10 CGA+10 GAG+10 ACC+10 TC  
#C+10 CGG+10 TCT+10 CTC+10 CTG+10 GCG+10 +10 +10 +10 1290 ?  
!Ala+10 Asp+10 Leu+10 Ala+10 Ser+10 Ala+10 Glu+10 Arg+10 Glu+10 Thr+10 Se  
#r+10 Arg+10 Ser+10 Leu+10 Leu+10 Ala ?  
!+10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 190+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 195 ?  
!+0  
!GCC+10 GGG+10 CAC+10 TGG+10 TGC+10 TGC+10 TTG+10 TGG+10 CAC+10 CCT+10 CG  
#G+10 CCG+10 TGC+10 CGC+10 GAA+10 GCG+10 +10 +10 +10 1338 ?  
!Ala+10 Gly+10 His+10 Trp+10 Cys+10 Cys+10 Leu+10 Trp+10 His+10 Pro+10 Ar  
#g+10 Pro+10 Cys+10 Arg+10 Glu+10 Ala ?  
!+10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 205+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 210 ?  
!+0  
!TGT+10 TTG+10 TAC+10 GAC+10 TCG+10 ATT+10 TAC+10 GTG+10 CAG+10 AGT+10 CT  
#T+10 TTC+10 TGC+10 GTC+10 GGG+10 ACG+10 +10 +10 +10 1386 ?  
!Cys+10 Leu+10 Tyr+10 Asp+10 Ser+10 Ile+10 Tyr+10 Val+10 Gln+10 Ser+10 Le  
#u+10 Phe+10 Cys+10 Val+10 Gly+10 Thr ?  
!215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#20+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#25+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#30 ?  
!+0  
!GGG+10 AGA+10 GTC+10 CCG+10 CAA+10 TCG+10 GAG+10 ATG+10 CGC+10 CGT+10 CG  
#C+10 GAA+10 TAC+10 CTG+10 GCC+10 GCC+10 +10 +10 +10 1434 ?  
!Gly+10 Arg+10 Val+10 Pro+10 Gln+10 Ser+10 Glu+10 Met+10 Arg+10 Arg+10 Ar  
#g+10 Glu+10 Tyr+10 Leu+10 Ala+10 Ala ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 235+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 240+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245 ?



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PM

!+0

!TTG+10 CGC+10 GCC+10 GGC+10 GCG+10 GCT+10 GCC+10 GCC+10 AAC+10 TCT+10 CC

#C+10 GAA+10 GTG+10 AGC+10 GCC+10 TCG+10 +10 +10 +10 1482 ?

!Leu+10 Arg+10 Ala+10 Gly+10 Ala+10 Ala+10 Ala+10 Ala+10 Asn+10 Ser+10 Pr

#o+10 Glu+10 Val+10 Ser+10 Ala+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260 ?

!+0

!ATC+10 TTT+10 GCG+10 AGG+10 GAC+10 GCT+10 GGA+10 ATC+10 GCG+10 CTG+10 GC

#G+10 CTG+10 GCG+10 CGG+10 CGC+10 CGT+10 +10 +10 +10 1530 ?

!Ile+10 Phe+10 Ala+10 Arg+10 Asp+10 Ala+10 Gly+10 Ile+10 Ala+10 Leu+10 Al

#a+10 Leu+10 Ala+10 Arg+10 Arg+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 270+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 275 ?

!+0

!TGA+10 CGGGAGAATG+10 ACGCCCTCTA+10 GCGGCTTCCT+10 TACCTCCGCG+10 TCCCTGACA

#A+10 +10 +10 +10 +10 +10 +10 +10 +10 1583 ?

!+10 . ?

!+0

!CCTCGCGGGT+10 TTTTACACTG+10 TCCTCCGTCC+10 ACTCTCCCCC+10 CTCACCCACT+10 CC

#GCGGCAGC+10 +10 1643 ?

!+0

!GAAACACAAC+10 CCCCCCCCCC+10 CCCCAGAAAC+10 GAGCGACACG+10 CGAGCGCTGC+10 GA

#AATAAATA+10 +10 1703 ?

!+0

!AAGTAATATT+10 ATTGTGTGTT+10 TTTCACGTTG+10 TTGCAATCGA+10 GAGGCCGTTT+10 GT

#CTGTCTGT+10 +10 1763 ?

!+0

!GTCTGTGCGG+10 AGCTAGGCTT+10 TCCCGGGCGG+10 CCCCCTTCCA+10 CCGTTCGGTT+10 AG

#GCCGGTGG+10 +10 1823 ?

!+0

!CGACGGGACA+10 TAGAGAAAGA+10 TAGAGCGCGC+10 GCCCTGGCGG+10 CGAGAGGGTG+10 TT

#GCGGGGGT+10 +10 1883 ?

!+0

!AAATGGGACC+10 CTGAGCTCAC+10 CATTTTGGCG+10 GGGGATTGCA+10 CGGGTAACAA+10 AA

#AGCTCTCT+10 +10 1943 ?

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!+0

!CGCACATAAT+10 GATTTCCCTT+10 AACAGTGGC+10 TGTAAAAGCT+10 TTCTTCGACT+10 GG  
#GACGCGCA+10 +10 2003 ?

!+0

!CGTCCGGAGA+10 CATGATCTTA+10 TCGGTAGCTA+10 CACAGTTCAT+10 GAGGTGGGCC+10 AC  
#GAACGCGC+10 +10 2063 ?

!+0

!GGATCGAGTT+10 TTGGGAACCT+10 TCGGGGAGGT+10 CTTCCGGGAG+10 GGTGAAGTTT+10 GA  
#CAGAGGCA+10 +10 2123 ?

!+0

!GCGCTATCAC+10 CAGGAGGCTC+10 CGCACCATCT+10 CCATGCCTAT+10 CCTTATCGCC+10 GC  
#GAGTCCGG+10 +10 2183 ?

!+0

!CGGCCGGCGC+10 GCTGCTCTGG+10 TTATTCCAGT+10 GCGCGGACCG+10 CGAGTGCGCC+10 CC  
#TCCCCGGG+10 +10 2243 ?

!+0

!CTCTGATATA+10 GAGCACCGGC+10 AGCTCGACGG+10 CGGCGGAGAA+10 AAAAGAAAGA+10 AT  
#GTCCGGCC+10 +10 2303 ?

!+0

!CAATGACTGG+10 AACTTTGGGC+10 ACGTCTCTTA+10 TTTCCCACGC+10 GGCGGCCCGG+10 GG  
#AATCTGCT+10 +10 2363 ?

!+0

!TGCCCCAGAC+10 CTTGCTTTCC+10 AACTCCCCGT+10 TCGGCCCCCC+10 AACTAACTCC+10 GA  
#CAGCGCGG+10 +10 2423 ?

!+0

!TCCACAGTCC+10 TACCGCCGCT+10 GCGACGGCGC+10 GCTTAGCCGC+10 GGGCGCTATT+10 CG  
#CGGGTCGT+10 +10 2483 ?

!+0

!GCGCCGTGAT+10 ATCTTCGGCG+10 ACCTGCAGAC+10 TGCCAGCCT+10 TTCCTTCCCT+10 TC  
#AAAATACG+10 +10 2543 ?

!+0

!CGCGGGCGGC+10 CTGTACGATC+10 ACCGCGGCCA+10 GATCGGGCCA+10 AAAGAAAATA+10 TC  
#GCAACTCT+10 +10 2603 ?

!+0

!GCGACGCCCG+10 CCAGAATCTC+10 CCTCCGGGCA+10 GGTCCGTGCC+10 CCTAAAGGCC+10 GC  
#CGAGAAAG+10 +10 2663 ?

!+0

!CTAAGTCCAA+10 ATGTGACGTC+10 GGAGGTCTCG+10 ACATGGTCGC+10 CAACCCTCCA+10 AA

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

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PM

#TGCTACCC+10 +10 2723 ?

!+0

!GCCGGCCAC+10 GCAACGCGGG+10 CTTTTATAAA+10 GATGGCGCGC+10 GAGACAATAA+10 CA

#CTTACTCA+10 +10 2783 ?

!+0

!TCCGCGTACG+10 CGTTTATTAT+10 TGTCAATATT+10 TGTGTGGTTA+10 TTATTACTGC+10 TA

#CCGCCCTT+10 +10 2843 ?

!+0

!GTTTCTGCAA+10 GGCCCTCGCC+10 GCGGCCCAGG+10 CCACATATCC+10 GGCAGCGGCC+10 GC

#CGACGCGG+10 +10 2903 ?

!+0

!CGAGCGTCGC+10 CGCTAACGTC+10 GGCGCCGCGG+10 GGAGCGGGGT+10 TTCTTCGACT+10 TA

#AATAGACT+10 +10 2963 ?

!+0

!CCCAGAAAA+10 AATTTTGGCT+10 GCCGTTCGCC+10 ATCATCCGAG+10 TCGGAAACAC+10 AG

#TATGCGGC+10 +10 3023 ?

!+0

!CGAGTTAGGT+10 TTTACTTTTA+10 AAACTTTAC+10 CGTGCTGTAC+10 GGCCAGGGCG+10 TT

#CTCAGGCT+10 +10 3083 ?

!+0

!CGAAGGGGCA+10 AGAGTTGTCC+10 AGACTGATGG+10 GTGACTCAGA+10 GACAGCGTTG+10 TC

#TTGTCTCC+10 +10 3143 ?

!+0

!GTTTACCAAA+10 AATATTTCCA+10 CTCCTCTCTC+10 AAAATTTTAA+10 CCTCCGGTTT+10 CG

#GTAATTAG+10 +10 3203 ?

!+0

!GAAAGTTTTT+10 GGCGCAGGGA+10 GGTTTAAAGC+10 TGCCATGCAT+10 ATGTCAGCGG+10 TA

#CCCAGCAC+10 +10 3263 ?

!+0

!CCACAAATGG+10 AACTCTTTTG+10 CGGCATACGC+10 GCCAGATGAC+10 AAATGGTAAA+10 AC

#CCTGCGTC+10 +10 3323 ?

!+0

!CAAGCCGCTC+10 CACTCGGGAC+10 TTACTCCAGG+10 CGGGTCGCCC+10 CCCTCACCGA+10 AC

#CGAATCAC+10 +10 3383 ?

!+0

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#GATGCCGG+10 +10 3443 ?

!+0

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PM

!GCGCACGATT+10 ACCGATAATG+10 TACTCGGACG+10 ATCGTAACTC+10 GCCATAGTTT+10 TC

#ACTGCGTG+10 +10 3503 ?

!+0

!AACCAATTCT+10 TTCCATCCAG+10 AATCCGAGAG+10 CTCAAATCTA+10 GAATTAGGTA+10 GT

#TTGTAGTG+10 +10 3563 ?

!+0

!CGAATCGACC+10 GCAGAACTA+10 TAGTCACTTT+10 TACAGGCGCC+10 ATCGCCGCTCAG+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 3615 ?

!+0

!ACTCCACCCC+10 GCTATGATGT+10 CAGAAATATA+10 ACGCTCTTAT+10 TCTAGCAGAG+10 TC

#AGGCCAAT+10 +10 3675 ?

!+0

!ATATACAGCT+10 TAGAGAAG+10 ATG+10 CGG+10 TTT+10 CGG+10 CGC+10 ATC+10 TGT+10

#TCA+10 CGC+10 TCT+10 AGG+10 +10 +10 +10 3726 ?

!+0

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 Met+10 Arg+10 Phe+10 Arg+10 Arg+10 Ile+10 Cys+10 Ser+10 Arg+10

#Ser+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 5+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 10 ?

!+0

!GCA+10 GAA+10 AAA+10 CGA+10 AGA+10 AGA+10 ACA+10 ACC+10 GAG+10 AAT+10 CC

#G+10 CTT+10 ACC+10 TCA+10 AAA+10 CGC+10 +10 +10 +10 3774 ?

!Ala+10 Glu+10 Lys+10 Arg+10 Arg+10 Arg+10 Thr+10 Thr+10 Glu+10 Asn+10 Pr

#o+10 Leu+10 Thr+10 Ser+10 Lys+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25 ?

!+0

!GTT+10 TGC+10 GTA+10 TTG+10 GAT+10 AGT+10 TTC+10 TCA+10 CGG+10 ACA+10 AT

#G+10 TCA+10 TTG+10 CGC+10 CCC+10 TAT+10 +10 +10 +10 3822 ?

!Val+10 Cys+10 Val+10 Leu+10 Asp+10 Ser+10 Phe+10 Ser+10 Arg+10 Thr+10 Me

#t+10 Ser+10 Leu+10 Arg+10 Pro+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 30+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40 ?

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PM

!+0

!GCA+10 GAA+10 ATT+10 TTG+10 CCG+10 ACC+10 GCG+10 GAA+10 GGC+10 GTC+10 GA

#G+10 CGC+10 CTC+10 GCC+10 GAA+10 CTT+10 +10 +10 +10 3870 ?

!Ala+10 Glu+10 Ile+10 Leu+10 Pro+10 Thr+10 Ala+10 Glu+10 Gly+10 Val+10 Gl

#u+10 Arg+10 Leu+10 Ala+10 Glu+10 Leu ?

!+10 +10 +10 +10 +10 45+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55 ?

!+0

!GTT+10 AGT+10 GTG+10 ACA+10 ATG+10 ACA+10 GAA+10 CGC+10 GCG+10 GAA+10 CC

#T+10 GTG+10 ACA+10 GAG+10 AAT+10 ACA+10 +10 +10 +10 3918 ?

!Val+10 Ser+10 Val+10 Thr+10 Met+10 Thr+10 Glu+10 Arg+10 Ala+10 Glu+10 Pr

#o+10 Val+10 Thr+10 Glu+10 Asn+10 Thr ?

!+10 60+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75 ?

!+0

!GCT+10 GTA+10 AAC+10 AGT+10 ATC+10 CCC+10 CCG+10 GCT+10 AAC+10 GAG+10 AA

#C+10 GGG+10 CAG+10 AAC+10 TTC+10 GCA+10 +10 +10 +10 3966 ?

!Ala+10 Val+10 Asn+10 Ser+10 Ile+10 Pro+10 Pro+10 Ala+10 Asn+10 Glu+10 As

#n+10 Gly+10 Gln+10 Asn+10 Phe+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 80+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90 ?

!+0

!TAT+10 GCA+10 GGC+10 GAT+10 GGG+10 CCC+10 TCG+10 ACT+10 ACT+10 GAA+10 AA

#A+10 GTT+10 GAC+10 GGC+10 TCG+10 CAT+10 +10 +10 4014 ?

!Tyr+10 Ala+10 Gly+10 Asp+10 Gly+10 Pro+10 Ser+10 Thr+10 Thr+10 Glu+10 Ly

#s+10 Val+10 Asp+10 Gly+10 Ser+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105 ?

!+0

!ACA+10 GAC+10 TTC+10 GAT+10 GAA+10 GCA+10 TCG+10 AGC+10 GAC+10 TAC+10 GC

#C+10 GGC+10 CCT+10 GTC+10 CCG+10 CTC+10 +10 +10 +10 4062 ?

!Thr+10 Asp+10 Phe+10 Asp+10 Glu+10 Ala+10 Ser+10 Ser+10 Asp+10 Tyr+10 Al

#a+10 Gly+10 Pro+10 Val+10 Pro+10 Leu ?

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PM

!+10 +10 +10 +10 +10 +10 +10 +10 110+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120 ?

!+0

!GCG+10 CAA+10 ACT+10 AGA+10 TTG+10 AAG+10 CAT+10 TCG+10 GAT+10 GAA+10 TT

#T+10 CTT+10 CAG+10 CAC+10 TTC+10 CGA+10 +10 +10 +10 4110 ?

!Ala+10 Gln+10 Thr+10 Arg+10 Leu+10 Lys+10 His+10 Ser+10 Asp+10 Glu+10 Ph

#e+10 Leu+10 Gln+10 His+10 Phe+10 Arg ?

!+10 +10 +10 +10 125+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135 ?

!+0

!GTT+10 TTA+10 GAC+10 GAT+10 TTG+10 GTG+10 GAG+10 GGG+10 GCT+10 TAC+10 GG

#G+10 TTT+10 ATC+10 TGC+10 GAC+10 GTC+10 +10 +10 +10 4158 ?

!Val+10 Leu+10 Asp+10 Asp+10 Leu+10 Val+10 Glu+10 Gly+10 Ala+10 Tyr+10 Gl

#y+10 Phe+10 Ile+10 Cys+10 Asp+10 Val ?

!140+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#45+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55 ?

!+0

!CGT+10 CGC+10 TAC+10 ACC+10 GAG+10 GAA+10 GAG+10 CAA+10 CGT+10 CGA+10 AG

#A+10 GGG+10 GTT+10 AAC+10 AGT+10 ACT+10 +10 +10 +10 4206 ?

!Arg+10 Arg+10 Tyr+10 Thr+10 Glu+10 Glu+10 Glu+10 Gln+10 Arg+10 Arg+10 Ar

#g+10 Gly+10 Val+10 Asn+10 Ser+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 160+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170 ?

!+0

!AAC+10 CAG+10 GGG+10 AAA+10 TCA+10 AAA+10 TGT+10 AAG+10 CGC+10 CTG+10 AT

#A+10 GCT+10 AAA+10 TAT+10 GTG+10 AAA+10 +10 +10 +10 4254 ?

!Asn+10 Gln+10 Gly+10 Lys+10 Ser+10 Lys+10 Cys+10 Lys+10 Arg+10 Leu+10 Il

#e+10 Ala+10 Lys+10 Tyr+10 Val+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185 ?

!+0

!AAT+10 GGA+10 ACA+10 AGG+10 GCG+10 GCC+10 TCT+10 CAG+10 CTG+10 GAA+10 AA

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PM

#T+10 GAA+10 ATT+10 TTG+10 GTT+10 CTC+10 +10 +10 +10 4302 ?

!Asn+10 Gly+10 Thr+10 Arg+10 Ala+10 Ala+10 Ser+10 Gln+10 Leu+10 Glu+10 As

#n+10 Glu+10 Ile+10 Leu+10 Val+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 190+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200 ?

!+0

!GGG+10 CGC+10 CTA+10 AAT+10 CAC+10 GAG+10 AAT+10 GTT+10 CTC+10 AAG+10 AT

#C+10 CAG+10 GAA+10 ATC+10 CTT+10 CGG+10 +10 +10 +10 4350 ?

!Gly+10 Arg+10 Leu+10 Asn+10 His+10 Glu+10 Asn+10 Val+10 Leu+10 Lys+10 Il

#e+10 Gln+10 Glu+10 Ile+10 Leu+10 Arg ?

!+10 +10 +10 +10 205+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215 ?

!+0

!TAC+10 CCG+10 GAT+10 AAT+10 ACG+10 TAC+10 ATG+10 TTA+10 ACG+10 CAG+10 AG

#G+10 TAT+10 CAG+10 TTC+10 GAC+10 TTG+10 +10 +10 +10 4398 ?

!Tyr+10 Pro+10 Asp+10 Asn+10 Thr+10 Tyr+10 Met+10 Leu+10 Thr+10 Gln+10 Ar

#g+10 Tyr+10 Gln+10 Phe+10 Asp+10 Leu ?

!220+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#25+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35 ?

!+0

!TAC+10 AGC+10 TAC+10 ATG+10 TAC+10 GAT+10 GAA+10 GCG+10 TTC+10 GAC+10 TG

#G+10 AAA+10 GAC+10 AGT+10 CCA+10 ATG+10 +10 +10 +10 4446 ?

!Tyr+10 Ser+10 Tyr+10 Met+10 Tyr+10 Asp+10 Glu+10 Ala+10 Phe+10 Asp+10 Tr

#p+10 Lys+10 Asp+10 Ser+10 Pro+10 Met ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 240+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250 ?

!+0

!CTT+10 AAA+10 CAG+10 ACT+10 AGA+10 CGC+10 ATC+10 ATG+10 AAG+10 CAG+10 CT

#C+10 ATG+10 TCA+10 GCG+10 GTC+10 TCG+10 +10 +10 +10 4494 ?

!Leu+10 Lys+10 Gln+10 Thr+10 Arg+10 Arg+10 Ile+10 Met+10 Lys+10 Gln+10 Le

#u+10 Met+10 Ser+10 Ala+10 Val+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265 ?

!+0

!TAT+10 ATC+10 CAT+10 TCA+10 AAG+10 AAA+10 CTG+10 ATT+10 CAC+10 AGG+10 GA

#C+10 ATC+10 AAA+10 CTC+10 GAA+10 AAT+10 +10 +10 +10 4542 ?

!Tyr+10 Ile+10 His+10 Ser+10 Lys+10 Lys+10 Leu+10 Ile+10 His+10 Arg+10 As

#p+10 Ile+10 Lys+10 Leu+10 Glu+10 Asn ?

!+10 +10 +10 +10 +10 +10 +10 +10 270+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280 ?

!+0

!ATT+10 TTC+10 TTA+10 AAC+10 TGC+10 GAC+10 GGC+10 AAG+10 ACA+10 GTG+10 CT

#G+10 GGC+10 GAC+10 TTT+10 GGA+10 ACT+10 +10 +10 +10 4590 ?

!Ile+10 Phe+10 Leu+10 Asn+10 Cys+10 Asp+10 Gly+10 Lys+10 Thr+10 Val+10 Le

#u+10 Gly+10 Asp+10 Phe+10 Gly+10 Thr ?

!+10 +10 +10 +10 285+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 295 ?

!+0

!GTC+10 ACG+10 CCT+10 TTT+10 GAA+10 AAT+10 GAG+10 CGG+10 GAG+10 CCC+10 TT

#C+10 GAA+10 TAT+10 GGA+10 TGG+10 GTG+10 +10 +10 +10 4638 ?

!Val+10 Thr+10 Pro+10 Phe+10 Glu+10 Asn+10 Glu+10 Arg+10 Glu+10 Pro+10 Ph

#e+10 Glu+10 Tyr+10 Gly+10 Trp+10 Val ?

!300+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#05+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15 ?

!+0

!GGG+10 ACC+10 GTG+10 GCT+10 ACT+10 AAC+10 TCT+10 CCC+10 GAG+10 ATA+10 CT

#C+10 GCC+10 AGG+10 GAT+10 TCG+10 TAC+10 +10 +10 4686 ?

!Gly+10 Thr+10 Val+10 Ala+10 Thr+10 Asn+10 Ser+10 Pro+10 Glu+10 Ile+10 Le

#u+10 Ala+10 Arg+10 Asp+10 Ser+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 320+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330 ?

!+0

!TGT+10 GAA+10 ATT+10 ACA+10 GAC+10 ATT+10 TGG+10 AGC+10 TGC+10 GGA+10 GT

#A+10 GTA+10 TTG+10 CTG+10 GAA+10 ATG+10 +10 +10 +10 4734 ?

!Cys+10 Glu+10 Ile+10 Thr+10 Asp+10 Ile+10 Trp+10 Ser+10 Cys+10 Gly+10 Va



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PM

#l+10 Val+10 Leu+10 Leu+10 Glu+10 Met ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345 ?

!+0

!GTA+10 AGC+10 CAT+10 GAA+10 TTT+10 TGC+10 CCG+10 ATC+10 GGC+10 GAT+10 GG

#C+10 GGG+10 GGA+10 AAT+10 CCG+10 CAC+10 +10 +10 +10 4782 ?

!Val+10 Ser+10 His+10 Glu+10 Phe+10 Cys+10 Pro+10 Ile+10 Gly+10 Asp+10 Gl

#y+10 Gly+10 Gly+10 Asn+10 Pro+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 350+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 360 ?

!+0

!CAG+10 CAA+10 TTG+10 CTG+10 AAA+10 GTT+10 ATC+10 GAC+10 TCT+10 CTC+10 TC

#A+10 GTT+10 TGT+10 GAT+10 GAA+10 GAG+10 +10 +10 +10 4830 ?

!Gln+10 Gln+10 Leu+10 Leu+10 Lys+10 Val+10 Ile+10 Asp+10 Ser+10 Leu+10 Se

#r+10 Val+10 Cys+10 Asp+10 Glu+10 Glu ?

!+10 +10 +10 +10 365+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 370+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 375 ?

!+0

!TTC+10 CCA+10 GAC+10 CCC+10 CCG+10 TGT+10 AAT+10 CTG+10 TAC+10 AAT+10 TA

#T+10 TTG+10 CAT+10 TAT+10 GCG+10 AGC+10 +10 +10 +10 4878 ?

!Phe+10 Pro+10 Asp+10 Pro+10 Pro+10 Cys+10 Asn+10 Leu+10 Tyr+10 Asn+10 Ty

#r+10 Leu+10 His+10 Tyr+10 Ala+10 Ser ?

!380+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#85+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#95 ?

!+0

!ATC+10 GAT+10 CGC+10 GCC+10 GGA+10 CAT+10 ACG+10 GTC+10 CCG+10 TCG+10 CT

#C+10 ATA+10 CGG+10 AAC+10 CTC+10 CAC+10 +10 +10 4926 ?

!Ile+10 Asp+10 Arg+10 Ala+10 Gly+10 His+10 Thr+10 Val+10 Pro+10 Ser+10 Le

#u+10 Ile+10 Arg+10 Asn+10 Leu+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 400+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 405+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410 ?

!+0

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PM

!CTT+10 CCG+10 GCG+10 GAT+10 GTG+10 GAA+10 TAC+10 CCT+10 CTA+10 GTT+10 AA  
#A+10 ATG+10 CTT+10 ACT+10 TTT+10 GAC+10 +10 +10 4974 ?  
!Leu+10 Pro+10 Ala+10 Asp+10 Val+10 Glu+10 Tyr+10 Pro+10 Leu+10 Val+10 Ly  
#s+10 Met+10 Leu+10 Thr+10 Phe+10 Asp ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425 ?  
!+0  
!TGG+10 CGT+10 TTG+10 AGA+10 CCC+10 AGC+10 GCG+10 GCC+10 GAA+10 GTA+10 TT  
#G+10 GCA+10 ATG+10 CCA+10 CTG+10 TTT+10 +10 +10 5022 ?  
!Trp+10 Arg+10 Leu+10 Arg+10 Pro+10 Ser+10 Ala+10 Ala+10 Glu+10 Val+10 Le  
#u+10 Ala+10 Met+10 Pro+10 Leu+10 Phe ?  
!+10 +10 +10 +10 +10 +10 +10 +10 430+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 435+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 440 ?  
!+0  
!TCG+10 GCT+10 GAA+10 GAG+10 GAA+10 CGG+10 ACC+10 ATA+10 ACA+10 ATT+10 AT  
#T+10 CAT+10 GGA+10 AAA+10 CAT+10 AAA+10 +10 +10 5070 ?  
!Ser+10 Ala+10 Glu+10 Glu+10 Glu+10 Arg+10 Thr+10 Ile+10 Thr+10 Ile+10 Il  
#e+10 His+10 Gly+10 Lys+10 His+10 Lys ?  
!+10 +10 +10 +10 445+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 450+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 455 ?  
!+0  
!CCC+10 ATC+10 CGA+10 CCC+10 GAA+10 ATC+10 CGT+10 GCG+10 CGG+10 GTG+10 CC  
#A+10 CGG+10 TCC+10 ATG+10 AGT+10 GAA+10 +10 +10 5118 ?  
!Pro+10 Ile+10 Arg+10 Pro+10 Glu+10 Ile+10 Arg+10 Ala+10 Arg+10 Val+10 Pr  
#o+10 Arg+10 Ser+10 Met+10 Ser+10 Glu ?  
!460+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4  
#65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4  
#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4  
#75 ?  
!+0  
!GGT+10 TAA+10 TAATAAAGGA+10 CGGAGATAGA+10 GAACTGAAGC+10 GTCAGATTTT+10 TT  
#TAAAAAAA+10 +10 +10 +10 5174 ?  
!Gly+10 +10 . ?  
!TAAATGATCG+10 AGAACTTATG+10 ATTTGCTCTTT+10 CTTGA+10 ATG+10 ACC+10 TTG+10  
#CCC+10 CAT+10 CGA+10 +10 +10 +10 5227 ?

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PM

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!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 Met+10 Thr+10 Leu+10 Pro+10 His+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 5 ?

!+0

!TTA+10 ACG+10 AAA+10 AGA+10 CCT+10 TTC+10 GCG+10 CGT+10 CGA+10 TTC+10 TG

#C+10 TCG+10 GTC+10 TTT+10 GTG+10 ATA+10 +10 +10 5275 ?

!Leu+10 Thr+10 Lys+10 Arg+10 Pro+10 Phe+10 Ala+10 Arg+10 Arg+10 Phe+10 Cy

#s+10 Ser+10 Val+10 Phe+10 Val+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20 ?

!+0

!CAT+10 TAT+10 AGT+10 GAG+10 ACT+10 AAA+10 CTC+10 GAC+10 CGA+10 TAT+10 AA

#C+10 AAG+10 ACA+10 ATG+10 TTA+10 CTC+10 +10 +10 5323 ?

!His+10 Tyr+10 Ser+10 Glu+10 Thr+10 Lys+10 Leu+10 Asp+10 Arg+10 Tyr+10 As

#n+10 Lys+10 Thr+10 Met+10 Leu+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 30+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 35 ?

!+0

!TAT+10 AGA+10 CCG+10 GAC+10 TCA+10 ACC+10 ATG+10 CGG+10 CAT+10 AGC+10 GG

#A+10 GGC+10 GAC+10 GCA+10 AAT+10 CAC+10 +10 +10 5371 ?

!Tyr+10 Arg+10 Pro+10 Asp+10 Ser+10 Thr+10 Met+10 Arg+10 His+10 Ser+10 Gl

#y+10 Gly+10 Asp+10 Ala+10 Asn+10 His ?

!+10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 45+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 50 ?

!+0

!AGA+10 GGG+10 ATA+10 AGG+10 CCG+10 AGG+10 CGG+10 AAA+10 TCT+10 ATT+10 GG

#A+10 GCG+10 TTT+10 AGC+10 GCG+10 CGC+10 +10 +10 5419 ?

!Arg+10 Gly+10 Ile+10 Arg+10 Pro+10 Arg+10 Arg+10 Lys+10 Ser+10 Ile+10 Gl

#y+10 Ala+10 Phe+10 Ser+10 Ala+10 Arg ?

!+10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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PM

#+10 60+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70 ?

!+0

!GAA+10 AAG+10 ACT+10 GGA+10 AAA+10 CGA+10 AAT+10 GCG+10 CTG+10 ACG+10 GA

#A+10 AGC+10 AGC+10 TCC+10 TCC+10 TCC+10 +10 +10 5467 ?

!Glu+10 Lys+10 Thr+10 Gly+10 Lys+10 Arg+10 Asn+10 Ala+10 Leu+10 Thr+10 Gl

#u+10 Ser+10 Ser+10 Ser+10 Ser+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 75+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 80+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85 ?

!+0

!GAC+10 ATG+10 CTA+10 GAT+10 CCG+10 TTT+10 TCC+10 ACG+10 GAT+10 AAG+10 GA

#A+10 TTT+10 GGC+10 GGT+10 AAG+10 TGG+10 +10 +10 5515 ?

!Asp+10 Met+10 Leu+10 Asp+10 Pro+10 Phe+10 Ser+10 Thr+10 Asp+10 Lys+10 Gl

#u+10 Phe+10 Gly+10 Gly+10 Lys+10 Trp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100 ?

!+0

!ACG+10 GTA+10 GAC+10 GGA+10 CCT+10 GCC+10 GAC+10 ATT+10 ACT+10 GCC+10 GA

#G+10 GTC+10 CTT+10 TCT+10 CAG+10 GCA+10 +10 +10 5563 ?

!Thr+10 Val+10 Asp+10 Gly+10 Pro+10 Ala+10 Asp+10 Ile+10 Thr+10 Ala+10 Gl

#u+10 Val+10 Leu+10 Ser+10 Gln+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 110+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 115 ?

!+0

!TGG+10 GAC+10 GTT+10 CTC+10 CAA+10 TTA+10 GTG+10 AAG+10 CAT+10 GAA+10 GA

#T+10 GCG+10 GAG+10 GAG+10 GAG+10 AGA+10 +10 +10 5611 ?

!Trp+10 Asp+10 Val+10 Leu+10 Gln+10 Leu+10 Val+10 Lys+10 His+10 Glu+10 As

#p+10 Ala+10 Glu+10 Glu+10 Glu+10 Arg ?

!+10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 125+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 130 ?

!+0

!GTG+10 ACT+10 TAT+10 GAG+10 TCC+10 AAA+10 CCG+10 ACC+10 CCG+10 ATA+10 CA

#G+10 CCG+10 TTC+10 AAT+10 GCC+10 TGG+10 +10 +10 5659 ?

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PM

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#n+10 Pro+10 Phe+10 Asn+10 Ala+10 Trp ?

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#40+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#45+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50 ?

!+0

!CCG+10 GAC+10 GGG+10 CCG+10 AGT+10 TGG+10 AAC+10 GCG+10 CAG+10 GAT+10 TT

#T+10 ACT+10 CGA+10 GCG+10 CCA+10 ATA+10 +10 +10 5707 ?

!Pro+10 Asp+10 Gly+10 Pro+10 Ser+10 Trp+10 Asn+10 Ala+10 Gln+10 Asp+10 Ph

#e+10 Thr+10 Arg+10 Ala+10 Pro+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 155+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 160+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165 ?

!+0

!GTT+10 TAT+10 CCC+10 TCT+10 GCG+10 GAG+10 GTA+10 TTG+10 GAC+10 GCA+10 GA

#G+10 GCG+10 TTG+10 AAA+10 GTA+10 GGG+10 +10 +10 5755 ?

!Val+10 Tyr+10 Pro+10 Ser+10 Ala+10 Glu+10 Val+10 Leu+10 Asp+10 Ala+10 Gl

#u+10 Ala+10 Leu+10 Lys+10 Val+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180 ?

!+0

!GCA+10 TTC+10 GTT+10 AGC+10 CGA+10 GTT+10 TTA+10 CAA+10 TGT+10 GTA+10 CC

#G+10 TTC+10 ACG+10 CGA+10 TCA+10 AAG+10 +10 +10 5803 ?

!Ala+10 Phe+10 Val+10 Ser+10 Arg+10 Val+10 Leu+10 Gln+10 Cys+10 Val+10 Pr

#o+10 Phe+10 Thr+10 Arg+10 Ser+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 195 ?

!+0

!AAA+10 AGC+10 GTT+10 ACG+10 GTG+10 CGG+10 GAT+10 GCG+10 CAG+10 TCG+10 TT

#T+10 TTG+10 GGG+10 GAC+10 TCG+10 TTC+10 +10 +10 5851 ?

!Lys+10 Ser+10 Val+10 Thr+10 Val+10 Arg+10 Asp+10 Ala+10 Gln+10 Ser+10 Ph

#e+10 Leu+10 Gly+10 Asp+10 Ser+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 205+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 210 ?

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PM

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#C+10 TTA+10 CGA+10 CAG+10 CAC+10 ATA+10 +10 +10 5899 ?

!Trp+10 Arg+10 Ile+10 Met+10 Gln+10 Asn+10 Val+10 Tyr+10 Thr+10 Val+10 Va

#l+10 Leu+10 Arg+10 Gln+10 His+10 Ile ?

!215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#20+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#25+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30 ?

!+0

!ACT+10 CGA+10 CTC+10 AGG+10 CAC+10 CCT+10 TCC+10 AGC+10 AAA+10 AGC+10 AT

#T+10 GTT+10 AAC+10 TGC+10 AAC+10 GAC+10 +10 +10 5947 ?

!Thr+10 Arg+10 Leu+10 Arg+10 His+10 Pro+10 Ser+10 Ser+10 Lys+10 Ser+10 Il

#e+10 Val+10 Asn+10 Cys+10 Asn+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 235+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 240+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245 ?

!+0

!CCT+10 CTA+10 TGG+10 TAC+10 GCC+10 TAC+10 GCG+10 AAT+10 CAA+10 TTT+10 CA

#C+10 TGG+10 AGA+10 GGA+10 ATG+10 CGC+10 +10 +10 5995 ?

!Pro+10 Leu+10 Trp+10 Tyr+10 Ala+10 Tyr+10 Ala+10 Asn+10 Gln+10 Phe+10 Hi

#s+10 Trp+10 Arg+10 Gly+10 Met+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260 ?

!+0

!GTG+10 CCG+10 TCG+10 CTT+10 AAA+10 TTA+10 GCC+10 TCT+10 CCC+10 CCG+10 GA

#G+10 GAG+10 AAT+10 ATT+10 CAA+10 CAC+10 +10 +10 6043 ?

!Val+10 Pro+10 Ser+10 Leu+10 Lys+10 Leu+10 Ala+10 Ser+10 Pro+10 Pro+10 Gl

#u+10 Glu+10 Asn+10 Ile+10 Gln+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 270+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 275 ?

!+0

!GGC+10 CCA+10 ATG+10 GCC+10 GCC+10 GTT+10 TTT+10 AGA+10 AAC+10 GCG+10 GG

#G+10 GCT+10 GGT+10 CTG+10 TTC+10 CTG+10 +10 +10 6091 ?

!Gly+10 Pro+10 Met+10 Ala+10 Ala+10 Val+10 Phe+10 Arg+10 Asn+10 Ala+10 Gl

#y+10 Ala+10 Gly+10 Leu+10 Phe+10 Leu ?

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PM

!+10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 285+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 290 ?

!+0

!TGG+10 CCT+10 GCC+10 ATG+10 CGC+10 GCA+10 GCC+10 TTT+10 GAA+10 GAG+10 CG

#C+10 GAC+10 AAG+10 CGA+10 CTG+10 TTA+10 +10 +10 6139 ?

!Trp+10 Pro+10 Ala+10 Met+10 Arg+10 Ala+10 Ala+10 Phe+10 Glu+10 Glu+10 Ar

#g+10 Asp+10 Lys+10 Arg+10 Leu+10 Leu ?

!295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#00+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#05+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#10 ?

!+0

!AGA+10 GCA+10 TGC+10 CTG+10 TCT+10 TCA+10 CTC+10 GAT+10 ATC+10 ATG+10 GA

#C+10 GCA+10 GCC+10 GTC+10 CTC+10 GCG+10 +10 +10 6187 ?

!Arg+10 Ala+10 Cys+10 Leu+10 Ser+10 Ser+10 Leu+10 Asp+10 Ile+10 Met+10 As

#p+10 Ala+10 Ala+10 Val+10 Leu+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 315+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 320+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325 ?

!+0

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#C+10 ACC+10 TCG+10 CGC+10 TTC+10 GAG+10 +10 +10 6235 ?

!Ser+10 Phe+10 Pro+10 Phe+10 Tyr+10 Trp+10 Arg+10 Gly+10 Val+10 Gln+10 As

#p+10 Thr+10 Ser+10 Arg+10 Phe+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340 ?

!+0

!CCT+10 GCG+10 CTG+10 GGC+10 TGT+10 TTG+10 TCA+10 GAG+10 TAC+10 TTT+10 GC

#A+10 CTA+10 GTG+10 GTG+10 TTA+10 CTG+10 +10 +10 6283 ?

!Pro+10 Ala+10 Leu+10 Gly+10 Cys+10 Leu+10 Ser+10 Glu+10 Tyr+10 Phe+10 Al

#a+10 Leu+10 Val+10 Val+10 Leu+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 350+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 355 ?

!+0

!GCC+10 GAG+10 ACG+10 GTC+10 TTA+10 GCG+10 ACC+10 ATG+10 TTC+10 GAC+10 CA

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PM

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#s+10 Ala+10 Leu+10 Val+10 Phe+10 Met ?

!+10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 365+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 370 ?

!+0

!AGG+10 GCG+10 CTG+10 GCA+10 GAC+10 GGC+10 AAT+10 TTC+10 GAT+10 GAC+10 TA

#T+10 GAC+10 GAA+10 ACT+10 AGA+10 TAT+10 +10 +10 6379 ?

!Arg+10 Ala+10 Leu+10 Ala+10 Asp+10 Gly+10 Asn+10 Phe+10 Asp+10 Asp+10 Ty

#r+10 Asp+10 Glu+10 Thr+10 Arg+10 Tyr ?

!375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#80+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#85+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#90 ?

!+0

!ATA+10 GAC+10 CCC+10 GTT+10 AAA+10 AAC+10 GAG+10 TAC+10 CTG+10 AAC+10 GG

#A+10 GCC+10 GAG+10 GGT+10 ACT+10 CTG+10 +10 +10 6427 ?

!Ile+10 Asp+10 Pro+10 Val+10 Lys+10 Asn+10 Glu+10 Tyr+10 Leu+10 Asn+10 Gl

#y+10 Ala+10 Glu+10 Gly+10 Thr+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 395+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 400+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 405 ?

!+0

!TTA+10 CGG+10 GGC+10 ATA+10 GTG+10 GCC+10 TCC+10 AAC+10 ACC+10 GCT+10 CT

#G+10 GCG+10 GTG+10 GTT+10 TGC+10 GCA+10 +10 +10 6475 ?

!Leu+10 Arg+10 Gly+10 Ile+10 Val+10 Ala+10 Ser+10 Asn+10 Thr+10 Ala+10 Le

#u+10 Ala+10 Val+10 Val+10 Cys+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420 ?

!+0

!AAC+10 ACC+10 TAT+10 TCG+10 ACG+10 ATA+10 AGA+10 AAA+10 CTC+10 CCG+10 TC

#C+10 GTG+10 GCA+10 ACT+10 AGC+10 GCG+10 +10 +10 6523 ?

!Asn+10 Thr+10 Tyr+10 Ser+10 Thr+10 Ile+10 Arg+10 Lys+10 Leu+10 Pro+10 Se

#r+10 Val+10 Ala+10 Thr+10 Ser+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 425+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 430+10 +10 +10 +10 +10 +10 +10 +10 +10



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PM

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!+0

!TGC+10 AAT+10 GTT+10 GCC+10 TAC+10 AGG+10 ACC+10 GAA+10 ACG+10 CTG+10 AA

#A+10 GCG+10 AGG+10 CGC+10 CCT+10 GGC+10 +10 +10 6571 ?

!Cys+10 Asn+10 Val+10 Ala+10 Tyr+10 Arg+10 Thr+10 Glu+10 Thr+10 Leu+10 Ly

#s+10 Ala+10 Arg+10 Arg+10 Pro+10 Gly ?

!+10 +10 +10 +10 440+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 445+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 450 ?

!+0

!ATG+10 AGC+10 GAC+10 ATA+10 TAC+10 CGG+10 ATA+10 TTA+10 CAA+10 AAA+10 GA

#G+10 TTT+10 TTC+10 TTT+10 TAC+10 ATT+10 +10 +10 6619 ?

!Met+10 Ser+10 Asp+10 Ile+10 Tyr+10 Arg+10 Ile+10 Leu+10 Gln+10 Lys+10 Gl

#u+10 Phe+10 Phe+10 Phe+10 Tyr+10 Ile ?

!455+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#60+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#70 ?

!+0

!GCG+10 TGG+10 CTC+10 CAG+10 AGG+10 GTT+10 GCA+10 ACA+10 CAC+10 GCA+10 AA

#T+10 TTC+10 TGT+10 TTA+10 AAC+10 ATT+10 +10 +10 6667 ?

!Ala+10 Trp+10 Leu+10 Gln+10 Arg+10 Val+10 Ala+10 Thr+10 His+10 Ala+10 As

#n+10 Phe+10 Cys+10 Leu+10 Asn+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 475+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 480+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 485 ?

!+0

!CTG+10 AAG+10 AGA+10 AGC+10 GTG+10 GAT+10 ACG+10 GGG+10 GCC+10 CCG+10 CC

#A+10 TTT+10 TTG+10 TTC+10 AGG+10 GCC+10 +10 +10 6715 ?

!Leu+10 Lys+10 Arg+10 Ser+10 Val+10 Asp+10 Thr+10 Gly+10 Ala+10 Pro+10 Pr

#o+10 Phe+10 Leu+10 Phe+10 Arg+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 490+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 495+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 500 ?

!+0

!AGC+10 TCG+10 GAG+10 AAG+10 CGG+10 CTG+10 CAG+10 CAG+10 TTA+10 AAT+10 AA

#A+10 ATG+10 CTC+10 TGC+10 CCC+10 CTT+10 +10 +10 6763 ?

!Ser+10 Ser+10 Glu+10 Lys+10 Arg+10 Leu+10 Gln+10 Gln+10 Leu+10 Asn+10 Ly

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PM

#s+10 Met+10 Leu+10 Cys+10 Pro+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 505+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 510+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 515 ?

!+0

!CTC+10 GTG+10 CCG+10 ATT+10 CAA+10 TAT+10 GAA+10 GAC+10 TTT+10 TCG+10 AA

#G+10 GCC+10 ATG+10 GGG+10 TCT+10 GAG+10 +10 +10 6811 ?

!Leu+10 Val+10 Pro+10 Ile+10 Gln+10 Tyr+10 Glu+10 Asp+10 Phe+10 Ser+10 Ly

#s+10 Ala+10 Met+10 Gly+10 Ser+10 Glu ?

!+10 +10 +10 +10 520+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 525+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 530 ?

!+0

!CTC+10 AAG+10 AGG+10 GAA+10 AAG+10 TTA+10 GAG+10 ACA+10 TTC+10 GTT+10 AA

#A+10 GCT+10 ATT+10 TCC+10 AGC+10 GAC+10 +10 +10 6859 ?

!Leu+10 Lys+10 Arg+10 Glu+10 Lys+10 Leu+10 Glu+10 Thr+10 Phe+10 Val+10 Ly

#s+10 Ala+10 Ile+10 Ser+10 Ser+10 Asp ?

!535+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#40+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#45+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#50 ?

!+0

!AGG+10 GAC+10 CCG+10 AGG+10 GGG+10 TCC+10 TTA+10 AGA+10 TTT+10 CTC+10 AT

#T+10 TCG+10 GAC+10 CAT+10 GCA+10 AGG+10 +10 +10 6907 ?

!Arg+10 Asp+10 Pro+10 Arg+10 Gly+10 Ser+10 Leu+10 Arg+10 Phe+10 Leu+10 Il

#e+10 Ser+10 Asp+10 His+10 Ala+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 555+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 560+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 565 ?

!+0

!GAA+10 ATT+10 ATT+10 GCA+10 GAC+10 GGA+10 GTA+10 CGG+10 TTT+10 AAG+10 CC

#G+10 GTG+10 ATA+10 GAC+10 GAG+10 CCG+10 +10 +10 6955 ?

!Glu+10 Ile+10 Ile+10 Ala+10 Asp+10 Gly+10 Val+10 Arg+10 Phe+10 Lys+10 Pr

#o+10 Val+10 Ile+10 Asp+10 Glu+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 570+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 575+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 580 ?

!+0

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PM

!GTT+10 CGG+10 GCT+10 TCA+10 GTT+10 GCG+10 CTG+10 AGT+10 ACC+10 GCT+10 GC  
#C+10 GCT+10 GGG+10 AAA+10 GTG+10 AAA+10 +10 +10 7003 ?  
!Val+10 Arg+10 Ala+10 Ser+10 Val+10 Ala+10 Leu+10 Ser+10 Thr+10 Ala+10 Al  
#a+10 Ala+10 Gly+10 Lys+10 Val+10 Lys ?  
!+10 +10 +10 +10 +10 +10 +10 +10 585+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 590+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 595 ?  
!+0  
!GCG+10 CGA+10 CGC+10 TTA+10 ACC+10 TCA+10 GTT+10 CGC+10 GCG+10 CCC+10 GT  
#A+10 CCG+10 GGC+10 GCA+10 GGC+10 GCC+10 +10 +10 7051 ?  
!Ala+10 Arg+10 Arg+10 Leu+10 Thr+10 Ser+10 Val+10 Arg+10 Ala+10 Pro+10 Va  
#l+10 Pro+10 Gly+10 Ala+10 Gly+10 Ala ?  
!+10 +10 +10 +10 600+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 605+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 610 ?  
!+0  
!GTT+10 TCC+10 GCG+10 CGC+10 CGG+10 AAA+10 TCG+10 GAA+10 ATA+10 TGA+10 TA  
#AAAAATGCT+10 TGGCATTGTC+10 +10 +10 +10 +10 7101 ?  
!Val+10 Ser+10 Ala+10 Arg+10 Arg+10 Lys+10 Ser+10 Glu+10 Ile+10 +10 . ?  
!615+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 6  
#20 ?  
!+0  
!GGGCGAAGAG+10 GCGTGATCTG+10 AAGGGCTCCA+10 CAATGACGTA+10 ACTGAGCTAC+10 GC  
#ATCCCTAT+10 7161 ?  
!+0  
!AAAGTGTAACC+10 CGCTGACCGC+10 TAGCCCATAC+10 AGTGTTACAG+10 GAGGGGAGAG+10 AG  
#ACAACTTC+10 7221 ?  
!+0  
!AGCTCGAAGT+10 CTGAAGAGAC+10 ATC+10 ATG+10 AGC+10 GGC+10 TTC+10 AGT+10 AA  
#C+10 ATA+10 GGA+10 TCG+10 +10 +10 +10 +10 7271 ?  
!+0  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 Met+10 Ser+10 Gly+10 Phe+10 Ser+10 Asn+10  
#Ile+10 Gly+10 Ser ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1+10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 5 ?  
!+0

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PM

!ATT+10 GCC+10 ACC+10 GTT+10 TCC+10 CTA+10 GTA+10 TGC+10 TCG+10 CTT+10 TT

#G+10 TGC+10 GCA+10 TCT+10 GTA+10 TTA+10 +10 +10 7319 ?

!Ile+10 Ala+10 Thr+10 Val+10 Ser+10 Leu+10 Val+10 Cys+10 Ser+10 Leu+10 Le

#u+10 Cys+10 Ala+10 Ser+10 Val+10 Leu ?

!+10 10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 20+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 25 ?

!+0

!GGG+10 GCG+10 CCG+10 GTA+10 CTG+10 GAC+10 GGG+10 CTC+10 GAG+10 TCG+10 AG

#C+10 CCT+10 TTC+10 CCG+10 TTC+10 GGG+10 +10 +10 7367 ?

!Gly+10 Ala+10 Pro+10 Val+10 Leu+10 Asp+10 Gly+10 Leu+10 Glu+10 Ser+10 Se

#r+10 Pro+10 Phe+10 Pro+10 Phe+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 35+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 40 ?

!+0

!GGC+10 AAA+10 ATT+10 ATA+10 GCC+10 CAG+10 GCG+10 TGC+10 AAC+10 CGC+10 AC

#C+10 ACG+10 ATT+10 GAG+10 GTG+10 ACG+10 +10 +10 7415 ?

!Gly+10 Lys+10 Ile+10 Ile+10 Ala+10 Gln+10 Ala+10 Cys+10 Asn+10 Arg+10 Th

#r+10 Thr+10 Ile+10 Glu+10 Val+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 45+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 50+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 55 ?

!+0

!GTC+10 CCG+10 TGG+10 AGC+10 GAC+10 TAC+10 TCT+10 GGT+10 CGC+10 ACC+10 GA

#A+10 GGA+10 GTG+10 TCA+10 GTC+10 GAG+10 +10 +10 7463 ?

!Val+10 Pro+10 Trp+10 Ser+10 Asp+10 Tyr+10 Ser+10 Gly+10 Arg+10 Thr+10 Gl

#u+10 Gly+10 Val+10 Ser+10 Val+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 60+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 65+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 70 ?

!+0

!GTG+10 AAA+10 TGG+10 TTC+10 TAC+10 GGG+10 AAT+10 AGT+10 AAT+10 CCC+10 GA

#A+10 AGC+10 TTC+10 GTG+10 TTC+10 GGG+10 +10 +10 7511 ?

!Val+10 Lys+10 Trp+10 Phe+10 Tyr+10 Gly+10 Asn+10 Ser+10 Asn+10 Pro+10 Gl

#u+10 Ser+10 Phe+10 Val+10 Phe+10 Gly ?

!+10 +10 +10 +10 +10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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PM

#+10 +10 +10 +10 +10 80+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 85 ?

!+0

!GTG+10 GAT+10 AGC+10 GAA+10 ACG+10 GGC+10 AGT+10 GGA+10 CAC+10 GAG+10 GA

#C+10 CTG+10 TCT+10 ACG+10 TGC+10 TGG+10 +10 +10 7559 ?

!Val+10 Asp+10 Ser+10 Glu+10 Thr+10 Gly+10 Ser+10 Gly+10 His+10 Glu+10 As

#p+10 Leu+10 Ser+10 Thr+10 Cys+10 Trp ?

!+10 90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#100+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#105 ?

!+0

!GCT+10 CTA+10 ATC+10 CAT+10 AAT+10 CTG+10 AAC+10 GCG+10 TCT+10 GTG+10 TG

#C+10 AGG+10 GCG+10 TCT+10 GAC+10 GCC+10 +10 +10 7607 ?

!Ala+10 Leu+10 Ile+10 His+10 Asn+10 Leu+10 Asn+10 Ala+10 Ser+10 Val+10 Cy

#s+10 Arg+10 Ala+10 Ser+10 Asp+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 115+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 120 ?

!+0

!GGG+10 ATA+10 CCT+10 GAT+10 TTC+10 GAC+10 AAG+10 CAG+10 TGC+10 GAA+10 AA

#A+10 GTG+10 CAG+10 AGA+10 AGA+10 CTG+10 +10 +10 7655 ?

!Gly+10 Ile+10 Pro+10 Asp+10 Phe+10 Asp+10 Lys+10 Gln+10 Cys+10 Glu+10 Ly

#s+10 Val+10 Gln+10 Arg+10 Arg+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 125+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 130+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 135 ?

!+0

!CGC+10 TCC+10 GGG+10 GTG+10 GAA+10 CTT+10 GGT+10 AGT+10 TAC+10 GTG+10 TC

#T+10 GGC+10 AAT+10 GGA+10 TCC+10 CTG+10 +10 +10 7703 ?

!Arg+10 Ser+10 Gly+10 Val+10 Glu+10 Leu+10 Gly+10 Ser+10 Tyr+10 Val+10 Se

#r+10 Gly+10 Asn+10 Gly+10 Ser+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 140+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 145+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 150 ?

!+0

!GTG+10 CTG+10 TAC+10 CCA+10 GGG+10 ATG+10 TAC+10 GAT+10 GCC+10 GGC+10 AT

#C+10 TAC+10 GCC+10 TAC+10 CAG+10 CTC+10 +10 +10 7751 ?

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[illegible]

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PM

!+0

!CCG+10 CTA+10 CGC+10 CCA+10 TGG+10 ACA+10 ACC+10 GTT+10 TGT+10 TCG+10 CA

#T+10 GAC+10 GTC+10 GAG+10 GAG+10 CAG+10 +10 +10 7991 ?

!Pro+10 Leu+10 Arg+10 Pro+10 Trp+10 Thr+10 Thr+10 Val+10 Cys+10 Ser+10 Hi

#s+10 Asp+10 Val+10 Glu+10 Glu+10 Gln ?

!+10 +10 +10 +10 235+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 240+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 245 ?

!+0

!GAA+10 AAC+10 GCC+10 ACG+10 GAC+10 GAG+10 CTT+10 TAC+10 CTA+10 TGG+10 GA

#C+10 GAG+10 GAA+10 TGC+10 GCC+10 GGT+10 +10 +10 8039 ?

!Glu+10 Asn+10 Ala+10 Thr+10 Asp+10 Glu+10 Leu+10 Tyr+10 Leu+10 Trp+10 As

#p+10 Glu+10 Glu+10 Cys+10 Ala+10 Gly ?

!250+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#60+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#65 ?

!+0

!CCG+10 CTG+10 GAC+10 GAG+10 TAC+10 GTC+10 GAC+10 GAA+10 AGG+10 TCA+10 GA

#G+10 ACG+10 ATG+10 CCC+10 AGG+10 ATG+10 +10 +10 8087 ?

!Pro+10 Leu+10 Asp+10 Glu+10 Tyr+10 Val+10 Asp+10 Glu+10 Arg+10 Ser+10 Gl

#u+10 Thr+10 Met+10 Pro+10 Arg+10 Met ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 275+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 280 ?

!+0

!GTT+10 GTC+10 TTT+10 TCA+10 CCG+10 CCC+10 TCT+10 ACG+10 CTC+10 CAG+10 CA

#G+10 TAG+10 CCACCCGAGA+10 +10 +10 +10 +10 +10 +10 +10 8133 ?

!Val+10 Val+10 Phe+10 Ser+10 Pro+10 Pro+10 Ser+10 Thr+10 Leu+10 Gln+10 Gl

#n+10 +10 . ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 285+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 290 ?

!+0

!GTGTTTTTTTG+10 TGAGCGCCCA+10 CGCAACATAC+10 CTAAGTGTCTT+10 CATTTCTGAT+10 CA

#ATTATTGC+10 +10 8193 ?

!+0

!GTATTGAATA+10 AATAAACAGT+10 ACAAAGCAT+10 CAGGTGTGGT+10 TTGCGTGTCT+10 GT

#GCTAAACC+10 +10 8253 ?

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PM

!+0

!ATGGCGTGTG+10 CGGGTGAAAC+10 CGTAAATTAC+10 GTGATAATAA+10 ATAGCATAGG+10 AG

#TTGGCGTG+10 +10 8313 ?

!+0

!CAGCGTATTT+10 CGCCGAGAGA+10 TGGGGACAAT+10 GTTAGTGTTG+10 CGCCTTTTCC+10 TA

#CTTGCAGT+10 +10 8373 ?

!+0

!AGCGGACGCG+10 GCGTTGCCGA+10 CCGGCAGATT+10 CTGCCGAGTT+10 TGGAAGGTGC+10 CT

#CCGGGAGG+10 +10 8433 ?

!+0

!AACCATCCAA+10 GAGAACCTGG+10 CGGTGCTCGC+10 GGAATCGCCG+10 GTCACGGGAC+10 AC

#GCGACATA+10 +10 8493 ?

!+0

!TCCGCCGCCT+10 GAAGGCGCCG+10 TCAGCTTTCA+10 GATTTTTCG+10 GACACCCCTA+10 CT

#TTGCGCAT+10 +10 8553 ?

!+0

!TCGTACGGC+10 GCTACGGAGG+10 ACGAACTTGC+10 ACTGGAGCGC+10 GGGACGTCCG+10 CC

#TCAGACGC+10 +10 8613 ?

!+0

!GGACAACGTG+10 ACATTTTCGC+10 TGTCATATCG+10 CCCGCGCCCA+10 GAAATTCACG+10 GA

#GCATACTT+10 +10 8673 ?

!+0

!CACCATAGGG+10 GTATTTCGCTA+10 CTGGCCAGAG+10 CACGGAAAGC+10 AGCTATTTCGG+10 TC

#ATCAGTCG+10 +10 8733 ?

!+0

!GGTCTTAGTT+10 AACGCCTCTC+10 TGGAACGGTC+10 CGTGCGCCTG+10 GAAACGCCGT+10 GC

#GATGAAAA+10 +10 8793 ?

!+0

!TTTTTTGCAG+10 AACGAGCCTA+10 CATGGGGCTC+10 GAAGCGTTGG+10 TTAGGCCCCC+10 CG

#TCGCCTTA+10 +10 8853 ?

!+0

!TGTGCGAGAT+10 AACGATGTCG+10 CCGTGTGAC+10 AAAAGCGCAG+10 TACATTGGGG+10 AG

#TGCTACTC+10 +10 8913 ?

!+0

!CAACTCGGCG+10 GCCCAGACGG+10 GGCTCACGTC+10 TCTCAACATG+10 ACCTTTTCT+10 AT

#TCGCCTAA+10 +10 8973 ?

!+0

!AGAATAGTA+10 AACGTCACGT+10 GGACAACCGG+10 CGGCCCCCTCC+10 CCCTCGCGCA+10 TA



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PM

#ACGGTATA+10 +10 9033 ?

!+0

!CTCGTCGCGG+10 GAGAACGGGC+10 AGCCCGTGTT+10 GAGGAACGTT+10 TCTGACGGGT+10 TC

#TTGGTTAA+10 +10 9093 ?

!+0

!GTACACTCCC+10 GACATTGACG+10 GCCGGGCCAT+10 GATAAACGTT+10 ATTGCCAATT+10 AT

#TCGCCGGC+10 +10 9153 ?

!+0

!GGACTCCGGC+10 AGCGTCCTCG+10 CGTTTACGGC+10 CTTTAGGGAA+10 GGAAACTCC+10 CA

#TCCGCGAT+10 +10 9213 ?

!+0

!TCAACTGCAC+10 CGGATAGATA+10 TGTCCGGGAC+10 TGAGCCGCCG+10 GGGACTGAAA+10 CG

#ACCTTCGA+10 +10 9273 ?

!+0

!CTGTCAAAAA+10 ATGATAGAAA+10 CCCCCTACCG+10 AGCGCTCGGG+10 AGCAATGTTTC+10 CC

#AGGGACGA+10 +10 9333 ?

!+0

!CTCTATCCGT+10 CCGGGGGCCA+10 CTCTGCCTCC+10 GTTCGATACC+10 GCAGCACCTG+10 AT

#TTCGATAC+10 +10 9393 ?

!+0

!AGGTACTTCC+10 CCGACCCCCA+10 CTACCGTGCC+10 AGAGCCAGCC+10 ATTACTACAC+10 TC

#ATACCGCG+10 +10 9453 ?

!+0

!CAGCACTAGC+10 GATATGGGAT+10 TCTTCTCCAC+10 GGCACGTGCT+10 ACCGGATCAG+10 AA

#ACTCTTTC+10 +10 9513 ?

!+0

!GGTACCCGTC+10 CAGGAAACGG+10 ATAGAACTCT+10 TTCGACAACT+10 CCTCTTACCC+10 TT

#CCACTGAC+10 +10 9573 ?

!+0

!TCCCGGTGAG+10 TCAGAAAATA+10 CACTGTTTCC+10 TACGACCGCG+10 CCGGGGATTT+10 CT

#ACCGAGAC+10 +10 9633 ?

!+0

!CCCAGCGCG+10 GCACATGAAA+10 CTACACAGAC+10 CCAGAGTGCA+10 GAAACGGTGG+10 TC

#TTTACTCA+10 +10 9693 ?

!+0

!GAGTCCGAGT+10 ACCGAGTCGG+10 AAACCGCGCG+10 GTCCCAGAGT+10 CAGGAACCGT+10 GG

#TATTTTAC+10 +10 9753 ?

!+0

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PM

!TCAGACTCCG+10 AGTACTGAAC+10 AGGCGGCTCT+10 TACTCAGACG+10 CAGATCGCAG+10 AA

#ACGGAGGC+10 +10 9813 ?

!+0

!GTTGTTTACT+10 CAGACTCCGA+10 GTGCTGAACA+10 GATGACTTTT+10 ACTCAGACTC+10 CG

#GGTGCAGA+10 +10 9873 ?

!+0

!AACCGAGGCA+10 CCTGCCCAGA+10 CCCCAGCAC+10 GATACCCGAG+10 ATATTTACTC+10 AG

#TCTCGTAG+10 +10 9933 ?

!+0

!CACGCCCCC+10 GAAACCGCTC+10 GCGCTCCGAG+10 CGCGGCGCCG+10 GAGGTTTTTA+10 CA

#CAGAGTTC+10 +10 9993 ?

!+0

!GAGTACGGTA+10 ACGGAGGTGT+10 TTACTCAGAC+10 CCCGAGCACG+10 GTACCGAAAA+10 CT

#ACTCTGAG+10 10053 ?

!+0

!TTCGAGTACT+10 GAACCGGCGA+10 TTTTACTCG+10 GACTCAGAGC+10 GCGGGAAC TG+10 AG

#GCCTTTAC+10 10113 ?

!+0

!TCAGACTTCG+10 AGTGCCGAGC+10 CGGACACTAT+10 GCGAACTCAG+10 AGTACTGAAA+10 CA

#CACTTTTT+10 10173 ?

!+0

!CACTCAGGCC+10 CCGAGTACGG+10 TACCGAAAGC+10 TACTCAGACT+10 CCGAGTACAG+10 AG

#CCGGAGGT+10 10233 ?

!+0

!GTTGACTCAG+10 AGTCCGAGTA+10 CCGAACCTGT+10 GCCTTTCACC+10 CGGACTCTGG+10 GC

#GCAGAGCC+10 10293 ?

!+0

!GGAAATTACT+10 CAGACCCCGA+10 GCGCGGCACC+10 GGAGGTTTAT+10 ACTCGGAGTT+10 CG

#AGTACGAT+10 10353 ?

!+0

!GCCAGAAACT+10 GCACAGAGCA+10 CACCCCTGGC+10 CTCGCAAAAC+10 CCTACCAGTT+10 CG

#GGAACCGG+10 10413 ?

!+0

!GACGCATAAT+10 ACTGAACCGA+10 GGACTTATCC+10 AGTGCAAACG+10 ACACCACATA+10 CC

#CAGAAACT+10 10473 ?

!+0

!CTACACAGAA+10 AATAAGACTT+10 TATCGTTTCC+10 TACTGTTGTT+10 TCAGAATTCC+10 AT

#GAGATGTC+10 10533 ?

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255 PM

!+0

!GACGGCAGAG+10 TCGCAGACGC+10 CCCTATTGGA+10 CGTCAAAATT+10 GTAGAGGTGA+10 AG  
#TTTTCAAA+10 10593 ?

!+0

!CGATGGCGAA+10 GTAACGGCGA+10 CTTGCGTTTC+10 CACCGTCAAA+10 TCTCCCTATA+10 GG  
#GTAGAAAC+10 10653 ?

!+0

!TAATTGGAAA+10 GTAGACCTCG+10 TAGATGTAAT+10 GGATGAAATT+10 TCTGGGAACA+10 GT  
#CCCGCCGG+10 10713 ?

!+0

!GGTTTTTAAC+10 AGTAATGAGA+10 AATGGCAGAA+10 ACAGCTGTAC+10 TACAGAGTAA+10 CC  
#GATGGAAG+10 10773 ?

!+0

!AACATCGGTC+10 CAGCTAATGT+10 GCCTGTCTGT+10 CACGAGCCAT+10 TCTCCGGAAC+10 CT  
#TACTGTCT+10 10833 ?

!+0

!TTTCGACACG+10 TCTCTTATAG+10 CGAGGGAAAA+10 AGATATCGCG+10 CCAGAGTTAT+10 AC  
#TTTACCTC+10 10893 ?

!+0

!TGATCCGCAA+10 ACGGCATACT+10 GCACAATAAC+10 TCTGCCGTCC+10 GCGTTGTTC+10 CG  
#AGATTCGA+10 10953 ?

!+0

!ATGGAGCCTT+10 AATAATGTTT+10 CACTGCCGGA+10 ATATTTGACG+10 GCCACGACCG+10 TT  
#GTTTCGCA+10 11013 ?

!+0

!TACCGCTGGC+10 CAAAGTACAG+10 TGTGGAAGAG+10 CAGCGCGAGA+10 GCAGGCGAGG+10 CG  
#TGGATTTTC+10 11073 ?

!+0

!TGGCCGGGGA+10 GGCAATATAT+10 ACGAATGCAC+10 CGTCCTCATC+10 TCAGACGGCA+10 CT  
#CGCGTTAC+10 11133 ?

!+0

!TACGCGAAAG+10 GAGAGGTGCT+10 TAACAAACAC+10 ATGGATTGCG+10 GTGGAAAACG+10 GT  
#GCTGCTCA+10 11193 ?

!+0

!GGCGCAGCTG+10 TATTCACCT+10 TTTCTGGACT+10 TGTGTCAGGA+10 TTATGCGGGA+10 GC  
#ATATCTGC+10 11253 ?

!+0

!TTTGTCGCA+10 ACGCTATGGA+10 CCGCCATTTA+10 TTTTGTAGGA+10 ATGCTTTTTG+10 GA

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

256

PM

#CTATCGTA+10 11313 ?

!+0

!CTGCTTTCTT+10 CCTTCGCTAG+10 CCAGAGCACC+10 GCCGCCGTCA+10 CGTACGACTA+10 CA

#TTT TAGGC+10 11373 ?

!+0

!CGTCGCGCGC+10 TCGACGCGCT+10 AACCATACCG+10 GCGGTTGGCC+10 CGTATAACAG+10 AT

#ACCTCACT+10 11433 ?

!+0

!AGGGTATCAA+10 GAGGCTGCGA+10 CGTTGTCGAG+10 CTCAACCCGA+10 TTTCTAACGT+10 GG

#ACGACATG+10 11493 ?

!+0

!ATATCGGCGG+10 CCAAAGAAAA+10 AGAGAAGGGG+10 GGCCCTTTTCG+10 AGGCCTCCGT+10 CG

#TCTGGTTC+10 11553 ?

!+0

!TACGTGATTA+10 AGGGCGACGA+10 CGGCGAGGAC+10 AAGTACTGTC+10 CAATCTATAG+10 AA

#AAGAGTAC+10 11613 ?

!+0

!AGGGAATGTG+10 GCGACGTACA+10 ACTGCTATCT+10 GAATGCGCCG+10 TTCAATCTGC+10 AC

#AGATGTGG+10 11673 ?

!+0

!GCAGTGGA CT+10 ATGTTCC TAG+10 CACCCTTGTA+10 TCGCGAAATG+10 GCGCGGGACT+10 GA

#CTATATTC+10 11733 ?

!+0

!TCCCCACTG+10 CTGCGCTCTC+10 TGGCCAATAC+10 TTGCTGACCC+10 TGAAAATCGG+10 GA

#GATTTGCG+10 11793 ?

!+0

!CAAACAGCTC+10 TCGTAACTCT+10 AGAAGTTAAC+10 GATCGCTGTT+10 TAAAGATCGG+10 GT

#CGCAGCTT+10 11853 ?

!+0

!AACTTTT TAC+10 CGTCGAAATG+10 CTGGACAACA+10 GAACAGTATC+10 AGACTGGATT+10 TC

#AAGGCGAA+10 11913 ?

!+0

!CACCTTTATC+10 CGATCGCAGA+10 CACCAATACA+10 CGACACGCGG+10 ACGACGTATA+10 TC

#GGGGATAC+10 11973 ?

!+0

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#CGCCAGAC+10 12033 ?

!+0

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257

PM

!CCTCGTCCAG+10 ATAGCGTCCC+10 GCAAGAAATT+10 CCCGCTGTAA+10 CCAAGAAAGC+10 GG

#AAGGGCGC+10 12093 ?

!+0

!ACCCCGGACG+10 CAGAAAGCAG+10 CGAAAAGAAG+10 GCCCCTCCAG+10 AAGACTCGGA+10 GG

#ACGACATG+10 12153 ?

!+0

!CAGGCAGAGG+10 CTTCTGGAGA+10 AAATCCTGCC+10 GCCCTCCCCG+10 AAGACGACGA+10 AG

#TCCCCGAG+10 12213 ?

!+0

!GACACCGAGC+10 ACGATGATCC+10 AAACCTCGGAT+10 CCTGACTATT+10 ACAATGACAT+10 GC

#CCGCCGTG+10 12273 ?

!+0

!ATCCCGGTGG+10 AGGAGACTAC+10 TAAAAGTTCT+10 AATGCCGTCT+10 CCATGCCCAT+10 AT

#TCGCGGCG+10 12333 ?

!+0

!TTCGTAGCCT+10 GCGCGGTCGC+10 GCTCGTGGGG+10 CTACTGGTTT+10 GGAGCATCGT+10 AA

#AATGCGCG+10 12393 ?

!+0

!CGTAGCTAAT+10 CGAGCCTAGA+10 ATAGGTGGTT+10 TCTTCCTACA+10 TGCCACGCCT+10 CA

#CGCTCATA+10 12453 ?

!+0

!AATATAAATC+10 ACATGGAATA+10 GCATACCAAT+10 GCCTATTTCAT+10 TGGGACGTTC+10 GA

#AAAGC+10 +10 +10 +10 12510 ?

!+0

!ATG+10 GCA+10 TCG+10 CTA+10 CTT+10 GGA+10 ACT+10 CTG+10 GCT+10 CTC+10 CT

#T+10 GCC+10 GCG+10 ACG+10 +10 +10 +10 +10 +10 +10 +10 +10 12552 ?

!Met+10 Ala+10 Ser+10 Leu+10 Leu+10 Gly+10 Thr+10 Leu+10 Ala+10 Leu+10 Le

#u+10 Ala+10 Ala+10 Thr ?

!1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10 ?

!+0

!CTC+10 GCA+10 CCC+10 TTC+10 GGC+10 GCG+10 ATG+10 GGA+10 ATC+10 GTG+10 AT

#C+10 ACT+10 GGA+10 AAT+10 CAC+10 GTC+10 +10 +10 12600 ?

!Leu+10 Ala+10 Pro+10 Phe+10 Gly+10 Ala+10 Met+10 Gly+10 Ile+10 Val+10 Il

#e+10 Thr+10 Gly+10 Asn+10 His+10 Val ?

!+10 15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 20+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 25+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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258 PM

#+10 30 ?

!+0

!TCC+10 GCC+10 AGG+10 ATT+10 GAC+10 GAC+10 GAT+10 CAC+10 ATC+10 GTG+10 AT

#C+10 GTC+10 GCG+10 CCT+10 CGC+10 CCC+10 +10 +10 12648 ?

!Ser+10 Ala+10 Arg+10 Ile+10 Asp+10 Asp+10 Asp+10 His+10 Ile+10 Val+10 Il

#e+10 Val+10 Ala+10 Pro+10 Arg+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 35+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 40+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!GAA+10 GCT+10 ACA+10 ATT+10 CAA+10 CTG+10 CAG+10 CTA+10 TTT+10 TTC+10 AT

#G+10 CCT+10 GGC+10 CAG+10 AGA+10 CCC+10 +10 +10 12696 ?

!Glu+10 Ala+10 Thr+10 Ile+10 Gln+10 Leu+10 Gln+10 Leu+10 Phe+10 Phe+10 Me

#t+10 Pro+10 Gly+10 Gln+10 Arg+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 50+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 55+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 60 ?

!+0

!CAC+10 AAA+10 CCC+10 TAC+10 TCA+10 GGA+10 ACC+10 GTC+10 CGC+10 GTC+10 GC

#G+10 TTT+10 CGG+10 TCT+10 GAT+10 ATA+10 +10 +10 12744 ?

!His+10 Lys+10 Pro+10 Tyr+10 Ser+10 Gly+10 Thr+10 Val+10 Arg+10 Val+10 Al

#a+10 Phe+10 Arg+10 Ser+10 Asp+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 65+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 70+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 75 ?

!+0

!ACA+10 AAC+10 CAG+10 TGC+10 TAC+10 CAG+10 GAA+10 CTT+10 AGC+10 GAG+10 GA

#G+10 CGC+10 TTT+10 GAA+10 AAT+10 TGC+10 +10 +10 +10 12792 ?

!Thr+10 Asn+10 Gln+10 Cys+10 Tyr+10 Gln+10 Glu+10 Leu+10 Ser+10 Glu+10 Gl

#u+10 Arg+10 Phe+10 Glu+10 Asn+10 Cys ?

!+10 +10 +10 +10 +10 80+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 85+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 90 ?

!+0

!ACT+10 CAT+10 CGA+10 TCG+10 TCT+10 TCT+10 GTT+10 TTT+10 GTC+10 GGC+10 TG

#T+10 AAA+10 GTG+10 ACC+10 GAG+10 TAC+10 +10 +10 +10 12840 ?

!Thr+10 His+10 Arg+10 Ser+10 Ser+10 Ser+10 Val+10 Phe+10 Val+10 Gly+10 Cy

#s+10 Lys+10 Val+10 Thr+10 Glu+10 Tyr ?

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PM

!+10 95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#100+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#105+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#110 ?

!+0

!ACG+10 TTC+10 TCC+10 GCC+10 TCG+10 AAC+10 AGA+10 CTA+10 ACC+10 GGA+10 CC

#T+10 CCA+10 CAC+10 CCG+10 TTT+10 AAG+10 +10 +10 +10 12888 ?

!Thr+10 Phe+10 Ser+10 Ala+10 Ser+10 Asn+10 Arg+10 Leu+10 Thr+10 Gly+10 Pr

#o+10 Pro+10 His+10 Pro+10 Phe+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 115+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 120+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!CTC+10 ACT+10 ATA+10 CGA+10 AAT+10 CCT+10 CGT+10 CCG+10 AAC+10 GAC+10 AG

#C+10 GGG+10 ATG+10 TTC+10 TAC+10 GTA+10 +10 +10 +10 12936 ?

!Leu+10 Thr+10 Ile+10 Arg+10 Asn+10 Pro+10 Arg+10 Pro+10 Asn+10 Asp+10 Se

#r+10 Gly+10 Met+10 Phe+10 Tyr+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 130+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 135+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 140 ?

!+0

!ATT+10 GTT+10 CGG+10 CTA+10 GAC+10 GAC+10 ACC+10 AAA+10 GAA+10 CCC+10 AT

#T+10 GAC+10 GTC+10 TTC+10 GCG+10 ATC+10 +10 +10 +10 12984 ?

!Ile+10 Val+10 Arg+10 Leu+10 Asp+10 Asp+10 Thr+10 Lys+10 Glu+10 Pro+10 Il

#e+10 Asp+10 Val+10 Phe+10 Ala+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 145+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 150+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 155 ?

!+0

!CAA+10 CTA+10 TCG+10 GTG+10 TAT+10 CAA+10 TTC+10 GCG+10 AAC+10 ACC+10 GC

#C+10 GCG+10 ACT+10 CGC+10 GGA+10 CTC+10 +10 +10 +10 13032 ?

!Gln+10 Leu+10 Ser+10 Val+10 Tyr+10 Gln+10 Phe+10 Ala+10 Asn+10 Thr+10 Al

#a+10 Ala+10 Thr+10 Arg+10 Gly+10 Leu ?

!+10 +10 +10 +10 160+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 165+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 170 ?

!+0

!TAT+10 TCC+10 AAG+10 GCT+10 TCG+10 TGT+10 CGC+10 ACC+10 TTC+10 GGA+10 TT

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

260

PM

#A+10 CCT+10 ACC+10 GTC+10 CAA+10 CTT+10 +10 +10 +10 13080 ?

!Tyr+10 Ser+10 Lys+10 Ala+10 Ser+10 Cys+10 Arg+10 Thr+10 Phe+10 Gly+10 Le

#u+10 Pro+10 Thr+10 Val+10 Gln+10 Leu ?

!175+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#80+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#85+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#90 ?

!+0

!GAG+10 GCC+10 TAT+10 CTC+10 AGG+10 ACC+10 GAG+10 GAA+10 AGT+10 TGG+10 CG

#C+10 AAC+10 TGG+10 CAA+10 GCG+10 TAC+10 +10 +10 +10 13128 ?

!Glu+10 Ala+10 Tyr+10 Leu+10 Arg+10 Thr+10 Glu+10 Glu+10 Ser+10 Trp+10 Ar

#g+10 Asn+10 Trp+10 Gln+10 Ala+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 195+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 200+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!GTT+10 GCC+10 ACG+10 GAG+10 GCC+10 ACG+10 ACG+10 ACC+10 AGC+10 GCC+10 GA

#G+10 GCG+10 ACA+10 ACC+10 CCG+10 ACG+10 +10 +10 +10 13176 ?

!Val+10 Ala+10 Thr+10 Glu+10 Ala+10 Thr+10 Thr+10 Thr+10 Ser+10 Ala+10 Gl

#u+10 Ala+10 Thr+10 Thr+10 Pro+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 210+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 215+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 220 ?

!+0

!CCC+10 GTC+10 ACT+10 GCA+10 ACC+10 AGC+10 GCC+10 TCC+10 GAA+10 CTT+10 GA

#A+10 GCG+10 GAA+10 CAC+10 TTT+10 ACC+10 +10 +10 +10 13224 ?

!Pro+10 Val+10 Thr+10 Ala+10 Thr+10 Ser+10 Ala+10 Ser+10 Glu+10 Leu+10 Gl

#u+10 Ala+10 Glu+10 His+10 Phe+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 230+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 235 ?

!+0

!TTT+10 CCC+10 TGG+10 CTA+10 GAA+10 AAT+10 GGC+10 GTG+10 GAT+10 CAT+10 TA

#C+10 GAA+10 CCG+10 ACA+10 CCC+10 GCA+10 +10 +10 +10 13272 ?

!Phe+10 Pro+10 Trp+10 Leu+10 Glu+10 Asn+10 Gly+10 Val+10 Asp+10 His+10 Ty

#r+10 Glu+10 Pro+10 Thr+10 Pro+10 Ala ?

!+10 +10 +10 +10 240+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 245+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10



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261

PM

#+10 +10 +10 250 ?

!+0

!AAC+10 GAA+10 AAT+10 TCA+10 AAC+10 GTT+10 ACT+10 GTC+10 CGT+10 CTC+10 GG

#G+10 ACA+10 ATG+10 AGC+10 CCT+10 ACG+10 +10 +10 +10 13320 ?

!Asn+10 Glu+10 Asn+10 Ser+10 Asn+10 Val+10 Thr+10 Val+10 Arg+10 Leu+10 Gl

#y+10 Thr+10 Met+10 Ser+10 Pro+10 Thr ?

!255+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#60+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#70 ?

!+0

!CTA+10 ATT+10 GGG+10 GTA+10 ACC+10 GTG+10 GCT+10 GCC+10 GTC+10 GTG+10 AG

#C+10 GCA+10 ACG+10 ATC+10 GGC+10 CTC+10 +10 +10 +10 13368 ?

!Leu+10 Ile+10 Gly+10 Val+10 Thr+10 Val+10 Ala+10 Ala+10 Val+10 Val+10 Se

#r+10 Ala+10 Thr+10 Ile+10 Gly+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 275+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 280+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!GTC+10 ATT+10 GTA+10 ATT+10 TCC+10 ATC+10 GTC+10 ACC+10 AGA+10 AAC+10 AT

#G+10 TGC+10 ACC+10 CCG+10 CAC+10 CGA+10 +10 +10 +10 13416 ?

!Val+10 Ile+10 Val+10 Ile+10 Ser+10 Ile+10 Val+10 Thr+10 Arg+10 Asn+10 Me

#t+10 Cys+10 Thr+10 Pro+10 His+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 290+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 295+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 300 ?

!+0

!AAA+10 TTA+10 GAC+10 ACG+10 GTC+10 TCG+10 CAA+10 GAC+10 GAC+10 GAA+10 GA

#A+10 CGT+10 TCC+10 CAA+10 ACT+10 AGA+10 +10 +10 +10 13464 ?

!Lys+10 Leu+10 Asp+10 Thr+10 Val+10 Ser+10 Gln+10 Asp+10 Asp+10 Glu+10 Gl

#u+10 Arg+10 Ser+10 Gln+10 Thr+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 305+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 310+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 315 ?

!+0

!AGG+10 GAA+10 TCG+10 CGA+10 AAA+10 TTT+10 GGA+10 CCC+10 ATG+10 GTT+10 GC

#G+10 TGC+10 GAA+10 ATA+10 AAC+10 AAG+10 +10 +10 +10 13512 ?

!Arg+10 Glu+10 Ser+10 Arg+10 Lys+10 Phe+10 Gly+10 Pro+10 Met+10 Val+10 Al

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

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PM

#a+10 Cys+10 Glu+10 Ile+10 Asn+10 Lys ?

!+10 +10 +10 +10 320+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 325+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 330 ?

!+0

!GGG+10 GCT+10 GAC+10 CAG+10 GAT+10 AGT+10 GAA+10 CTT+10 GTG+10 GAA+10 CT

#G+10 GTT+10 GCG+10 ATT+10 GTT+10 AAC+10 +10 +10 +10 13560 ?

!Gly+10 Ala+10 Asp+10 Gln+10 Asp+10 Ser+10 Glu+10 Leu+10 Val+10 Glu+10 Le

#u+10 Val+10 Ala+10 Ile+10 Val+10 Asn ?

!335+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#40+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#45+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#50 ?

!+0

!CCG+10 TCT+10 GCG+10 CTA+10 AGC+10 TCG+10 CCC+10 GAC+10 TCA+10 ATA+10 AA

#A+10 ATG+10 TGA+10 TTAAGTCTGA+10 +10 +10 +10 +10 13609 ?

!Pro+10 Ser+10 Ala+10 Leu+10 Ser+10 Ser+10 Pro+10 Asp+10 Ser+10 Ile+10 Ly

#s+10 Met+10 +10 . ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 355+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 360 ?

!+0

!ATGTGGCTCT+10 CCAATCATTT+10 CGATTCTCTA+10 ATCTCCCAAT+10 CCTCTCAAAA+10 GG

#GGCAGTAT+10 +10 13669 ?

!+0

!CGGACACGGA+10 CTGGGAGGGG+10 CGTACACGAT+10 AGTTATATGG+10 TACAGCAGAG+10 GC

#CTCTGAAC+10 +10 13729 ?

!+0

!ACTTAGGAGG+10 AGAATTCAGC+10 CGGGGAGAGC+10 CCCTGTTGAG+10 TAGGCTTGGG+10 AG

#CATATTGC+10 +10 13789 ?

!+0

!AGG+10 ATG+10 AAC+10 ATG+10 TTA+10 GTG+10 ATA+10 GTT+10 CTC+10 GCC+10 TC

#T+10 TGT+10 CTT+10 GCG+10 CGC+10 CTA+10 +10 +10 +10 13837 ?

!+10 +10 +10 +10 Met+10 Asn+10 Met+10 Leu+10 Val+10 Ile+10 Val+10 Leu+10

#Ala+10 Ser+10 Cys+10 Leu+10 Ala+10 Arg+10 Leu ?

!+10 +10 +10 +10 +10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 5+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 15 ?

!+0

!ACT+10 TTT+10 GCG+10 ACG+10 CGA+10 CAC+10 GTC+10 CTC+10 TTT+10 TTG+10 GA  
#A+10 GGC+10 ACT+10 CAG+10 GCT+10 GTC+10 +10 +10 +10 13885 ?

!Thr+10 Phe+10 Ala+10 Thr+10 Arg+10 His+10 Val+10 Leu+10 Phe+10 Leu+10 Gl  
#u+10 Gly+10 Thr+10 Gln+10 Ala+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!CTC+10 GGG+10 GAA+10 GAT+10 GAT+10 CCC+10 AGA+10 AAC+10 GTT+10 CCG+10 GA  
#A+10 GGG+10 ACT+10 GTA+10 ATC+10 AAA+10 +10 +10 +10 13933 ?

!Leu+10 Gly+10 Glu+10 Asp+10 Asp+10 Pro+10 Arg+10 Asn+10 Val+10 Pro+10 Gl  
#u+10 Gly+10 Thr+10 Val+10 Ile+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!TGG+10 ACA+10 AAA+10 GTC+10 CTG+10 CGG+10 AAC+10 GCG+10 TGC+10 AAG+10 AT  
#G+10 AAG+10 GCG+10 GCC+10 GAT+10 GTC+10 +10 +10 +10 13981 ?

!Trp+10 Thr+10 Lys+10 Val+10 Leu+10 Arg+10 Asn+10 Ala+10 Cys+10 Lys+10 Me  
#t+10 Lys+10 Ala+10 Ala+10 Asp+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 60 ?

!+0

!TGC+10 TCT+10 TCG+10 CCT+10 AAC+10 TAT+10 TGC+10 TTT+10 CAT+10 GAT+10 TT  
#A+10 ATT+10 TAC+10 GAC+10 GGA+10 GGA+10 +10 +10 +10 14029 ?

!Cys+10 Ser+10 Ser+10 Pro+10 Asn+10 Tyr+10 Cys+10 Phe+10 His+10 Asp+10 Le  
#u+10 Ile+10 Tyr+10 Asp+10 Gly+10 Gly ?

!+10 +10 +10 +10 +10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 75 ?

!+0

!AAG+10 AAA+10 GAC+10 TGC+10 CCG+10 CCC+10 GCG+10 GGA+10 CCC+10 CTG+10 TC  
#T+10 GCA+10 AAC+10 CTG+10 GTA+10 ATT+10 +10 +10 +10 14077 ?

!Lys+10 Lys+10 Asp+10 Cys+10 Pro+10 Pro+10 Ala+10 Gly+10 Pro+10 Leu+10 Se  
#r+10 Ala+10 Asn+10 Leu+10 Val+10 Ile ?

!+10 80+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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PM

#+10 85+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 95 ?

!+0

!TTA+10 CTA+10 AAG+10 CGC+10 GGC+10 GAA+10 AGC+10 TTC+10 GTC+10 GTG+10 CT

#G+10 GGT+10 TCT+10 GGG+10 CTA+10 CAC+10 +10 +10 +10 14125 ?

!Leu+10 Leu+10 Lys+10 Arg+10 Gly+10 Glu+10 Ser+10 Phe+10 Val+10 Val+10 Le

#u+10 Gly+10 Ser+10 Gly+10 Leu+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!AAC+10 AGC+10 AAT+10 ATA+10 ACT+10 AAT+10 ATC+10 ATG+10 TGG+10 ACA+10 GA

#G+10 TAC+10 GGA+10 GGC+10 CTG+10 CTC+10 +10 +10 +10 14173 ?

!Asn+10 Ser+10 Asn+10 Ile+10 Thr+10 Asn+10 Ile+10 Met+10 Trp+10 Thr+10 Gl

#u+10 Tyr+10 Gly+10 Gly+10 Leu+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!TTT+10 GAT+10 CCT+10 GTA+10 ACT+10 CGT+10 TCG+10 GAC+10 GAG+10 GGA+10 AT

#C+10 TAT+10 TTT+10 CGA+10 CGG+10 ATC+10 +10 +10 +10 14221 ?

!Phe+10 Asp+10 Pro+10 Val+10 Thr+10 Arg+10 Ser+10 Asp+10 Glu+10 Gly+10 Il

#e+10 Tyr+10 Phe+10 Arg+10 Arg+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 140 ?

!+0

!TCT+10 CAG+10 CCA+10 GAT+10 CTG+10 GCC+10 ATG+10 GAA+10 ACT+10 ACA+10 TC

#G+10 TAC+10 AAC+10 GTC+10 AGC+10 GTT+10 +10 +10 +10 14269 ?

!Ser+10 Gln+10 Pro+10 Asp+10 Leu+10 Ala+10 Met+10 Glu+10 Thr+10 Thr+10 Se

#r+10 Tyr+10 Asn+10 Val+10 Ser+10 Val ?

!+10 +10 +10 +10 145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 150+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 155 ?

!+0

!CTT+10 TCG+10 CAC+10 GTA+10 GAC+10 GAG+10 AAG+10 GCT+10 CCA+10 GCA+10 CC

#G+10 CAC+10 GAG+10 GTG+10 GAG+10 ATA+10 +10 +10 +10 14317 ?

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265

PM

!Leu+10 Ser+10 His+10 Val+10 Asp+10 Glu+10 Lys+10 Ala+10 Pro+10 Ala+10 Pr

#o+10 His+10 Glu+10 Val+10 Glu+10 Ile ?

!160+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#75 ?

!+0

!GAC+10 ACC+10 ATC+10 AAG+10 CCG+10 TCA+10 GAG+10 GCC+10 CAC+10 GCG+10 CA

#C+10 GTG+10 GAA+10 TTA+10 CAA+10 ATG+10 +10 +10 +10 14365 ?

!Asp+10 Thr+10 Ile+10 Lys+10 Pro+10 Ser+10 Glu+10 Ala+10 His+10 Ala+10 Hi

#s+10 Val+10 Glu+10 Leu+10 Gln+10 Met ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!CTG+10 CCG+10 TTT+10 CAT+10 GAA+10 CTC+10 AAC+10 GAC+10 AAC+10 AGC+10 CC

#C+10 ACC+10 TAT+10 GTG+10 ACC+10 CCT+10 +10 +10 +10 14413 ?

!Leu+10 Pro+10 Phe+10 His+10 Glu+10 Leu+10 Asn+10 Asp+10 Asn+10 Ser+10 Pr

#o+10 Thr+10 Tyr+10 Val+10 Thr+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!GTT+10 CTT+10 AGA+10 GTC+10 TTC+10 CCA+10 CCG+10 ACC+10 GAG+10 CAC+10 GT

#A+10 AAA+10 TTT+10 AAC+10 GTT+10 ACG+10 +10 +10 +10 14461 ?

!Val+10 Leu+10 Arg+10 Val+10 Phe+10 Pro+10 Pro+10 Thr+10 Glu+10 His+10 Va

#l+10 Lys+10 Phe+10 Asn+10 Val+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 220 ?

!+0

!TAT+10 TCG+10 TGG+10 TAT+10 GGG+10 TTT+10 GAT+10 GTC+10 AAA+10 GAG+10 GA

#G+10 TGC+10 GAA+10 GAA+10 GTG+10 AAA+10 +10 +10 +10 14509 ?

!Tyr+10 Ser+10 Trp+10 Tyr+10 Gly+10 Phe+10 Asp+10 Val+10 Lys+10 Glu+10 Gl

#u+10 Cys+10 Glu+10 Glu+10 Val+10 Lys ?

!+10 +10 +10 +10 225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 230+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 235 ?

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266

PM

!+0

!CTG+10 TTC+10 GAG+10 CCG+10 TGC+10 GTA+10 TAC+10 CAT+10 CCT+10 ACA+10 GA

#C+10 GGC+10 AAA+10 TGT+10 CAG+10 TTT+10 +10 +10 +10 14557 ?

!Leu+10 Phe+10 Glu+10 Pro+10 Cys+10 Val+10 Tyr+10 His+10 Pro+10 Thr+10 As

#p+10 Gly+10 Lys+10 Cys+10 Gln+10 Phe ?

!240+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#45+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#55 ?

!+0

!CCC+10 GCA+10 ACC+10 AAC+10 CAG+10 AGA+10 TGC+10 CTC+10 ATA+10 GGA+10 TC

#T+10 GTC+10 TTG+10 ATG+10 GCG+10 GAA+10 +10 +10 +10 14605 ?

!Pro+10 Ala+10 Thr+10 Asn+10 Gln+10 Arg+10 Cys+10 Leu+10 Ile+10 Gly+10 Se

#r+10 Val+10 Leu+10 Met+10 Ala+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!TTC+10 TTG+10 GGC+10 GCG+10 GCC+10 TCT+10 TTG+10 CTG+10 GAT+10 TGT+10 TC

#C+10 CGC+10 GAT+10 ACT+10 CTA+10 GAA+10 +10 +10 +10 14653 ?

!Phe+10 Leu+10 Gly+10 Ala+10 Ala+10 Ser+10 Leu+10 Leu+10 Asp+10 Cys+10 Se

#r+10 Arg+10 Asp+10 Thr+10 Leu+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!GAC+10 TGC+10 CAC+10 GAA+10 AAT+10 CGC+10 GTG+10 CCG+10 AAC+10 CTA+10 CG

#G+10 TTC+10 GAT+10 TCG+10 CGA+10 CTC+10 +10 +10 +10 14701 ?

!Asp+10 Cys+10 His+10 Glu+10 Asn+10 Arg+10 Val+10 Pro+10 Asn+10 Leu+10 Ar

#g+10 Phe+10 Asp+10 Ser+10 Arg+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 300 ?

!+0

!TCC+10 GAG+10 TCA+10 CGC+10 GCA+10 GGC+10 CTG+10 GTG+10 ATC+10 AGT+10 CC

#T+10 CTT+10 ATA+10 GCC+10 ATC+10 CCC+10 +10 +10 +10 14749 ?

!Ser+10 Glu+10 Ser+10 Arg+10 Ala+10 Gly+10 Leu+10 Val+10 Ile+10 Ser+10 Pr

#o+10 Leu+10 Ile+10 Ala+10 Ile+10 Pro ?

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267

PM

!+10 +10 +10 +10 305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 310+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 315 ?

!+0

!AAA+10 GTT+10 TTG+10 ATT+10 ATA+10 GTC+10 GTT+10 TCC+10 GAC+10 GGA+10 GA

#C+10 ATT+10 TTG+10 GGA+10 TGG+10 AGC+10 +10 +10 +10 14797 ?

!Lys+10 Val+10 Leu+10 Ile+10 Ile+10 Val+10 Val+10 Ser+10 Asp+10 Gly+10 As

#p+10 Ile+10 Leu+10 Gly+10 Trp+10 Ser ?

!320+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#25+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#35 ?

!+0

!TAC+10 ACG+10 GTG+10 CTC+10 GGG+10 AAA+10 CGT+10 AAC+10 AGT+10 CCG+10 CG

#C+10 GTA+10 GTA+10 GTC+10 GAA+10 ACG+10 +10 +10 +10 14845 ?

!Tyr+10 Thr+10 Val+10 Leu+10 Gly+10 Lys+10 Arg+10 Asn+10 Ser+10 Pro+10 Ar

#g+10 Val+10 Val+10 Val+10 Glu+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?

!+0

!CAC+10 ATG+10 CCC+10 TCG+10 AAG+10 GTC+10 CCG+10 ATG+10 AAC+10 AAA+10 GT

#A+10 GTA+10 ATT+10 GGC+10 AGT+10 CCC+10 +10 +10 +10 14893 ?

!His+10 Met+10 Pro+10 Ser+10 Lys+10 Val+10 Pro+10 Met+10 Asn+10 Lys+10 Va

#l+10 Val+10 Ile+10 Gly+10 Ser+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 365 ?

!+0

!GGA+10 CCA+10 ATG+10 GAC+10 GAA+10 ACG+10 GGT+10 AAC+10 TAT+10 AAA+10 AT

#G+10 TAC+10 TTC+10 GTC+10 GTC+10 GCG+10 +10 +10 +10 14941 ?

!Gly+10 Pro+10 Met+10 Asp+10 Glu+10 Thr+10 Gly+10 Asn+10 Tyr+10 Lys+10 Me

#t+10 Tyr+10 Phe+10 Val+10 Val+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 370+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 380 ?

!+0

!GGG+10 GTG+10 GCC+10 GCG+10 ACG+10 TGC+10 GTA+10 ATT+10 CTT+10 ACA+10 TG

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268

PM

#C+10 GCT+10 CTG+10 CTT+10 GTG+10 GGG+10 +10 +10 +10 14989 ?

!Gly+10 Val+10 Ala+10 Ala+10 Thr+10 Cys+10 Val+10 Ile+10 Leu+10 Thr+10 Cy

#s+10 Ala+10 Leu+10 Leu+10 Val+10 Gly ?

!+10 +10 +10 +10 385+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 390+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 395 ?

!+0

!AAA+10 AAG+10 AAG+10 TGC+10 CCC+10 GCG+10 CAC+10 CAA+10 ATG+10 GGT+10 AC

#T+10 TTT+10 TCC+10 AAG+10 ACC+10 GAA+10 +10 +10 +10 15037 ?

!Lys+10 Lys+10 Lys+10 Cys+10 Pro+10 Ala+10 His+10 Gln+10 Met+10 Gly+10 Th

#r+10 Phe+10 Ser+10 Lys+10 Thr+10 Glu ?

!400+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#05+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#15 ?

!+0

!CCA+10 TTG+10 TAC+10 GCG+10 CCG+10 CTC+10 CCC+10 AAA+10 AAC+10 GAG+10 TT

#T+10 GAG+10 GCC+10 GGC+10 GGG+10 CTT+10 +10 +10 +10 15085 ?

!Pro+10 Leu+10 Tyr+10 Ala+10 Pro+10 Leu+10 Pro+10 Lys+10 Asn+10 Glu+10 Ph

#e+10 Glu+10 Ala+10 Gly+10 Gly+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430 ?

!+0

!ACG+10 GAC+10 GAT+10 GAG+10 GAA+10 GTG+10 ATT+10 TAT+10 GAC+10 GAA+10 GT

#A+10 TAC+10 GAA+10 CCC+10 CTA+10 TTT+10 +10 +10 +10 15133 ?

!Thr+10 Asp+10 Asp+10 Glu+10 Glu+10 Val+10 Ile+10 Tyr+10 Asp+10 Glu+10 Va

#l+10 Tyr+10 Glu+10 Pro+10 Leu+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 435+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 440+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 445 ?

!+0

!CGC+10 GGC+10 TAC+10 TGT+10 AAG+10 CAG+10 GAA+10 TTC+10 CGC+10 GAA+10 GA

#T+10 GTG+10 AAT+10 ACC+10 TTT+10 TTC+10 +10 +10 +10 15181 ?

!Arg+10 Gly+10 Tyr+10 Cys+10 Lys+10 Gln+10 Glu+10 Phe+10 Arg+10 Glu+10 As

#p+10 Val+10 Asn+10 Thr+10 Phe+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 450+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 455+10 +10 +10 +10 +10 +10 +10 +10 +10 +10



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269

PM

#+10 +10 +10 +10 +10 +10 +10 460 ?

!+0

!GGT+10 GCG+10 GTC+10 GTG+10 GAG+10 GGA+10 GAA+10 AGG+10 GCC+10 TTA+10 AA

#C+10 TTT+10 AAA+10 TCC+10 GCC+10 ATC+10 +10 +10 +10 15229 ?

!Gly+10 Ala+10 Val+10 Val+10 Glu+10 Gly+10 Glu+10 Arg+10 Ala+10 Leu+10 As

#n+10 Phe+10 Lys+10 Ser+10 Ala+10 Ile ?

!+10 +10 +10 +10 465+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 470+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 475 ?

!+0

!GCA+10 TCA+10 ATG+10 GCA+10 GAT+10 CGC+10 ATC+10 CTG+10 GCA+10 AAT+10 AA

#A+10 AGC+10 GGC+10 AGA+10 AGG+10 AAT+10 +10 +10 +10 15277 ?

!Ala+10 Ser+10 Met+10 Ala+10 Asp+10 Arg+10 Ile+10 Leu+10 Ala+10 Asn+10 Ly

#s+10 Ser+10 Gly+10 Arg+10 Arg+10 Asn ?

!480+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#85+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#95 ?

!+0

!ATG+10 GAT+10 AGC+10 TAT+10 TAG+10 TTGGTC+10 ATG+10 CCT+10 TTT+10 AAG+10

#ACC+10 AGA+10 GGG+10 GCC+10 GAA+10 +10 +10 +10 +10 15325 ?

!Met+10 Asp+10 Ser+10 Tyr+10 +10 .+10 +10 +10 +10 +10 +10 +10 +10 Met

#+10 Pro+10 Phe+10 Lys+10 Thr+10 Arg+10 Gly+10 Ala+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 500+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 5 ?

!+0

!GAC+10 GCG+10 GCC+10 GCG+10 GGC+10 AAG+10 AAC+10 AGG+10 TTT+10 AAG+10 AA

#A+10 TCG+10 AGA+10 AAT+10 CGG+10 GAA+10 +10 +10 +10 15373 ?

!Asp+10 Ala+10 Ala+10 Ala+10 Gly+10 Lys+10 Asn+10 Arg+10 Phe+10 Lys+10 Ly

#s+10 Ser+10 Arg+10 Asn+10 Arg+10 Glu ?

!+10 10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 20+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 25 ?

!+0

!ATC+10 TTA+10 CCG+10 ACC+10 AGA+10 CTG+10 CGT+10 GGC+10 ACC+10 GGT+10 AA

#G+10 AAA+10 ACT+10 GCC+10 GGA+10 TTG+10 +10 +10 +10 15421 ?



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PM

!+0

!AAA+10 AAA+10 CTA+10 TCA+10 TCT+10 TCA+10 GAC+10 TGC+10 GAG+10 GGC+10 GC

#G+10 CAC+10 CAA+10 CCC+10 CTA+10 GTA+10 +10 +10 +10 15661 ?

!Lys+10 Lys+10 Leu+10 Ser+10 Ser+10 Ser+10 Asp+10 Cys+10 Glu+10 Gly+10 Al

#a+10 His+10 Gln+10 Pro+10 Leu+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 115+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 120 ?

!+0

!TCC+10 TGT+10 AAA+10 CTT+10 CCG+10 GAT+10 TCT+10 CAA+10 GCA+10 GCA+10 CC

#G+10 GCG+10 CGA+10 ACC+10 TAT+10 AGT+10 +10 +10 +10 15709 ?

!Ser+10 Cys+10 Lys+10 Leu+10 Pro+10 Asp+10 Ser+10 Gln+10 Ala+10 Ala+10 Pr

#o+10 Ala+10 Arg+10 Thr+10 Tyr+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 125+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 130+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 135 ?

!+0

!TCT+10 GCG+10 CAA+10 AGA+10 TAT+10 ACT+10 GTT+10 GAC+10 GAG+10 GTT+10 TC

#G+10 TCG+10 CCA+10 ACT+10 CCG+10 CCA+10 +10 +10 +10 15757 ?

!Ser+10 Ala+10 Gln+10 Arg+10 Tyr+10 Thr+10 Val+10 Asp+10 Glu+10 Val+10 Se

#r+10 Ser+10 Pro+10 Thr+10 Pro+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 140+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 150 ?

!+0

!GGC+10 GTC+10 GAC+10 GCT+10 GTT+10 GCG+10 GAC+10 TTA+10 GAA+10 ACG+10 CG

#C+10 GCG+10 GAA+10 CTT+10 CCT+10 GGC+10 +10 +10 +10 15805 ?

!Gly+10 Val+10 Asp+10 Ala+10 Val+10 Ala+10 Asp+10 Leu+10 Glu+10 Thr+10 Ar

#g+10 Ala+10 Glu+10 Leu+10 Pro+10 Gly ?

!+10 +10 +10 +10 155+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 160+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 165 ?

!+0

!GCT+10 ACG+10 ACG+10 GAA+10 CAA+10 ACG+10 GAA+10 AGT+10 AAA+10 AAT+10 AA

#G+10 CTC+10 CCC+10 AAC+10 CAA+10 CAA+10 +10 +10 +10 15853 ?

!Ala+10 Thr+10 Thr+10 Glu+10 Gln+10 Thr+10 Glu+10 Ser+10 Lys+10 Asn+10 Ly

#s+10 Leu+10 Pro+10 Asn+10 Gln+10 Gln ?

!170+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

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PM

#75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#80+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#85 ?

!+0

!TCG+10 CGC+10 CTG+10 AAG+10 CCG+10 AAA+10 CCC+10 ACA+10 AAC+10 GAG+10 CA

#C+10 GTC+10 GGA+10 GGG+10 GAG+10 CGG+10 +10 +10 +10 15901 ?

!Ser+10 Arg+10 Leu+10 Lys+10 Pro+10 Lys+10 Pro+10 Thr+10 Asn+10 Glu+10 Hi

#s+10 Val+10 Gly+10 Gly+10 Glu+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 195+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 200 ?

!+0

!TGC+10 CCC+10 TCC+10 GAA+10 GGC+10 ACG+10 GTC+10 GAG+10 GCG+10 CCA+10 TC

#G+10 CTC+10 GGC+10 ATC+10 CTC+10 TCG+10 +10 +10 +10 15949 ?

!Cys+10 Pro+10 Ser+10 Glu+10 Gly+10 Thr+10 Val+10 Glu+10 Ala+10 Pro+10 Se

#r+10 Leu+10 Gly+10 Ile+10 Leu+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 205+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 210+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 215 ?

!+0

!CGC+10 GTC+10 GGG+10 GCA+10 GCG+10 ATA+10 GCA+10 AAC+10 GAG+10 CTG+10 GC

#T+10 CGT+10 ATG+10 CGG+10 AGG+10 GCG+10 +10 +10 +10 15997 ?

!Arg+10 Val+10 Gly+10 Ala+10 Ala+10 Ile+10 Ala+10 Asn+10 Glu+10 Leu+10 Al

#a+10 Arg+10 Met+10 Arg+10 Arg+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 220+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 225+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 230 ?

!+0

!TGT+10 CTT+10 CCG+10 CTC+10 GCC+10 GCG+10 TCG+10 GCG+10 GCC+10 GCT+10 GC

#C+10 GGA+10 ATA+10 GTG+10 GCC+10 TGG+10 +10 +10 +10 16045 ?

!Cys+10 Leu+10 Pro+10 Leu+10 Ala+10 Ala+10 Ser+10 Ala+10 Ala+10 Ala+10 Al

#a+10 Gly+10 Ile+10 Val+10 Ala+10 Trp ?

!+10 +10 +10 +10 235+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 240+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 245 ?

!+0

!GCC+10 GCG+10 GCG+10 AGG+10 GCC+10 TTG+10 CAG+10 AAA+10 CAA+10 GGG+10 CG

#G+10 TAG+10 CAGTAATAAT+10 +10 +10 +10 +10 +10 +10 +10 +10 16091 ?

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PM

!Ala+10 Ala+10 Ala+10 Arg+10 Ala+10 Leu+10 Gln+10 Lys+10 Gln+10 Gly+10 Ar

#g+10 +10 . ?

!250+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#60 ?

!+0

!AACCACACAA+10 ATATTGACAA+10 TAATAAACGC+10 GTACGCGG+10 ATG+10 AGT+10 AAG+10

#TGT+10 TAT+10 +10 +10 +10 +10 +10 16144 ?

!+0

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 Met+10 Ser+10 Lys+10 Cys+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 5 ?

!+0

!TGT+10 CTC+10 GCG+10 CGC+10 CAT+10 CTT+10 TAT+10 AAA+10 AGC+10 CCG+10 CG

#T+10 TGC+10 GTG+10 GGC+10 CGG+10 CGG+10 +10 +10 +10 16192 ?

!Cys+10 Leu+10 Ala+10 Arg+10 His+10 Leu+10 Tyr+10 Lys+10 Ser+10 Pro+10 Ar

#g+10 Cys+10 Val+10 Gly+10 Arg+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20 ?

!+0

!GTA+10 GCA+10 TTT+10 GGA+10 GGG+10 TTG+10 GCG+10 ACC+10 ATG+10 TCG+10 AG

#A+10 CCT+10 CCG+10 ACG+10 TCA+10 CAT+10 +10 +10 +10 16240 ?

!Val+10 Ala+10 Phe+10 Gly+10 Gly+10 Leu+10 Ala+10 Thr+10 Met+10 Ser+10 Ar

#g+10 Pro+10 Pro+10 Thr+10 Ser+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 35 ?

!+0

!TTG+10 GAC+10 TTA+10 GCT+10 TTC+10 TCG+10 GCG+10 GCC+10 TTT+10 AGG+10 GG

#C+10 ACG+10 GAC+10 CTG+10 CCC+10 GGA+10 +10 +10 +10 16288 ?

!Leu+10 Asp+10 Leu+10 Ala+10 Phe+10 Ser+10 Ala+10 Ala+10 Phe+10 Arg+10 Gl

#y+10 Thr+10 Asp+10 Leu+10 Pro+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 45+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 50 ?

!+0

!GGG+10 AGA+10 TTC+10 TGG+10 CGG+10 GCG+10 TCG+10 CAG+10 AGT+10 TGC+10 GA

#T+10 ATT+10 TTC+10 TTT+10 TGG+10 CCC+10 +10 +10 +10 16336 ?

!Gly+10 Arg+10 Phe+10 Trp+10 Arg+10 Ala+10 Ser+10 Gln+10 Ser+10 Cys+10 As

#p+10 Ile+10 Phe+10 Phe+10 Trp+10 Pro ?

!+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 65 ?

!+0

!GAT+10 CTG+10 GCC+10 GCG+10 GTG+10 ATC+10 GTA+10 CAG+10 GCC+10 GCC+10 CG

#C+10 GCG+10 TAT+10 TTT+10 GAA+10 GGG+10 +10 +10 +10 16384 ?

!Asp+10 Leu+10 Ala+10 Ala+10 Val+10 Ile+10 Val+10 Gln+10 Ala+10 Ala+10 Ar

#g+10 Ala+10 Tyr+10 Phe+10 Glu+10 Gly ?

!+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 85 ?

!+0

!AAG+10 GAA+10 AGG+10 CTG+10 GGC+10 AGT+10 CTG+10 CAG+10 GTC+10 GCC+10 GA

#A+10 GAT+10 ATC+10 ACG+10 GCG+10 CAC+10 +10 +10 +10 16432 ?

!Lys+10 Glu+10 Arg+10 Leu+10 Gly+10 Ser+10 Leu+10 Gln+10 Val+10 Ala+10 Gl

#u+10 Asp+10 Ile+10 Thr+10 Ala+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100 ?

!+0

!GAC+10 CCG+10 CGA+10 ATA+10 GCG+10 CCC+10 GCG+10 GCT+10 AAG+10 CGC+10 GC

#C+10 GTC+10 GCA+10 GCG+10 GCG+10 GTA+10 +10 +10 +10 16480 ?

!Asp+10 Pro+10 Arg+10 Ile+10 Ala+10 Pro+10 Ala+10 Ala+10 Lys+10 Arg+10 Al

#a+10 Val+10 Ala+10 Ala+10 Ala+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 115 ?

!+0

!GGA+10 CTG+10 TGG+10 ACC+10 GCG+10 CTG+10 TCG+10 GAG+10 TTA+10 GTT+10 GG

#G+10 GGG+10 CCG+10 AAC+10 GGG+10 GAG+10 +10 +10 +10 16528 ?

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PM

!Gly+10 Leu+10 Trp+10 Thr+10 Ala+10 Leu+10 Ser+10 Glu+10 Leu+10 Val+10 Gl  
#y+10 Gly+10 Pro+10 Asn+10 Gly+10 Glu ?  
!+10 +10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 125+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 130 ?  
!+0  
!TTG+10 GAA+10 AGC+10 AAG+10 GTC+10 TGG+10 GGC+10 AAG+10 CAG+10 ATT+10 CC  
#C+10 CGG+10 GCC+10 GCC+10 GCG+10 TGG+10 +10 +10 +10 16576 ?  
!Leu+10 Glu+10 Ser+10 Lys+10 Val+10 Trp+10 Gly+10 Lys+10 Gln+10 Ile+10 Pr  
#o+10 Arg+10 Ala+10 Ala+10 Ala+10 Trp ?  
!+10 +10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 140+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 145 ?  
!+0  
!GAA+10 ATA+10 AGA+10 GAC+10 GTG+10 CCC+10 AAA+10 GTT+10 CCA+10 GTC+10 AT  
#T+10 GGG+10 CCG+10 GAC+10 ATT+10 CTT+10 +10 +10 +10 16624 ?  
!Glu+10 Ile+10 Arg+10 Asp+10 Val+10 Pro+10 Lys+10 Val+10 Pro+10 Val+10 Il  
#e+10 Gly+10 Pro+10 Asp+10 Ile+10 Leu ?  
!150+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1  
#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1  
#60+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1  
#65 ?  
!+0  
!TCT+10 TTT+10 TTC+10 TCC+10 GCC+10 GCC+10 GTC+10 GAG+10 CTG+10 CCG+10 GT  
#G+10 CTC+10 TAT+10 ATC+10 AGA+10 GCC+10 +10 +10 +10 16672 ?  
!Ser+10 Phe+10 Phe+10 Ser+10 Ala+10 Ala+10 Val+10 Glu+10 Leu+10 Pro+10 Va  
#l+10 Leu+10 Tyr+10 Ile+10 Arg+10 Ala ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180 ?  
!+0  
!CGG+10 GGA+10 GGG+10 GCG+10 CAC+10 TCG+10 CGG+10 TCC+10 GCG+10 CAC+10 TG  
#G+10 AAT+10 AAC+10 CAG+10 AGC+10 AGC+10 +10 +10 +10 16720 ?  
!Arg+10 Gly+10 Gly+10 Ala+10 His+10 Ser+10 Arg+10 Ser+10 Ala+10 His+10 Tr  
#p+10 Asn+10 Asn+10 Gln+10 Ser+10 Ser ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 195 ?

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PM

!+0

!GCG+10 CCG+10 GCC+10 GCC+10 GGA+10 CTC+10 GCG+10 GCG+10 ATA+10 AGG+10 AT

#A+10 GGC+10 ATG+10 GAG+10 ATG+10 GTG+10 +10 +10 +10 16768 ?

!Ala+10 Pro+10 Ala+10 Ala+10 Gly+10 Leu+10 Ala+10 Ala+10 Ile+10 Arg+10 Il

#e+10 Gly+10 Met+10 Glu+10 Met+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 210 ?

!+0

!CGG+10 AGC+10 CTC+10 CTG+10 GTG+10 ATA+10 GCG+10 CTG+10 CCT+10 CTG+10 TC

#A+10 AAC+10 TTC+10 ACC+10 CTC+10 CCG+10 +10 +10 +10 16816 ?

!Arg+10 Ser+10 Leu+10 Leu+10 Val+10 Ile+10 Ala+10 Leu+10 Pro+10 Leu+10 Se

#r+10 Asn+10 Phe+10 Thr+10 Leu+10 Pro ?

!+10 +10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 225 ?

!+0

!GAA+10 GAC+10 CTC+10 CCC+10 GAA+10 GGT+10 TCC+10 CAA+10 AAC+10 TCG+10 AT

#C+10 CGC+10 GCG+10 TTC+10 GTG+10 GCC+10 +10 +10 +10 16864 ?

!Glu+10 Asp+10 Leu+10 Pro+10 Glu+10 Gly+10 Ser+10 Gln+10 Asn+10 Ser+10 Il

#e+10 Arg+10 Ala+10 Phe+10 Val+10 Ala ?

!230+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#45 ?

!+0

!CAC+10 CTC+10 ATG+10 AAC+10 TGT+10 GTA+10 GCT+10 ACC+10 GAT+10 AAG+10 AT

#C+10 ATG+10 TCT+10 CCG+10 GAC+10 GTG+10 +10 +10 +10 16912 ?

!His+10 Leu+10 Met+10 Asn+10 Cys+10 Val+10 Ala+10 Thr+10 Asp+10 Lys+10 Il

#e+10 Met+10 Ser+10 Pro+10 Asp+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260 ?

!+0

!CGC+10 GTC+10 CCA+10 GTC+10 GAA+10 GAA+10 AGC+10 TTT+10 TAC+10 AGC+10 CA

#C+10 TGT+10 TTA+10 AGG+10 GAA+10 ATC+10 +10 +10 +10 16960 ?

!Arg+10 Val+10 Pro+10 Val+10 Glu+10 Glu+10 Ser+10 Phe+10 Tyr+10 Ser+10 Hi

#s+10 Cys+10 Leu+10 Arg+10 Glu+10 Ile ?



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PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 275 ?

!+0

!ATT+10 ATG+10 TGC+10 GAG+10 AGA+10 GCT+10 TTT+10 TGT+10 TAC+10 CCG+10 TG

#C+10 AAT+10 CCC+10 CCG+10 CCA+10 AAA+10 +10 +10 +10 17008 ?

!Ile+10 Met+10 Cys+10 Glu+10 Arg+10 Ala+10 Phe+10 Cys+10 Tyr+10 Pro+10 Cy

#s+10 Asn+10 Pro+10 Pro+10 Pro+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 290 ?

!+0

!TGG+10 TGA+10 GCTCAGGGTC+10 CCATTTACCC+10 CCGCAACACC+10 CTCTCGCCGC+10 CA

#GGGCGCGC+10 +10 +10 +10 +10 17064 ?

!Trp+10 +10 . ?

!+10 +10 +10 +10 295 ?

!+0

!GCTCTATCTT+10 TCTCTATGTC+10 CCGTCGCCAC+10 CGGCCTAACC+10 GAACGGTGGA+10 AC

#GGGGCCGC+10 +10 17124 ?

!+0

!CCGGGAAAGC+10 CTAGCTCCGC+10 ACAGACACAG+10 ACAGACAAAC+10 GGCTCTCGA+10 TT

#GCAACAAC+10 +10 17184 ?

!+0

!GTGAAAAACA+10 CACAATAATA+10 TTACTTTATT+10 TATTTTCGAG+10 CGCTCGCGTG+10 TC

#GCTCGTTT+10 +10 17244 ?

!+0

!CTGGGGGGGG+10 GGGGGGGTTG+10 TGTTCGCTG+10 CCGCGGAGTG+10 GGTGAGGGGG+10 GA

#GAGTGGAC+10 +10 17304 ?

!+0

!GGAGGACAGT+10 GTAAAAACCC+10 GCGAGGTTGT+10 CAGGGACGCG+10 GAGGTAAGGA+10 AG

#CCGCTAGA+10 +10 17364 ?

!+0

!GGGCGTCATT+10 CTCCCGTCAA+10 CGGCGCCGCG+10 CCAGCGCCAG+10 CGCGATTCCA+10 GC

#GTCCCTCG+10 +10 17424 ?

!+0

!CAAAGATCGA+10 GGCCTCACT+10 TCGGGAGAGT+10 TGGCGGCAGC+10 CGCGCCGGCG+10 CG

#CAAGGCGG+10 +10 17484 ?

!+0

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PM

!CCAGGTATTC+10 GCGACGGCGC+10 ATCTCCGATT+10 GCGGGACTCT+10 CCCC GTCCCG+10 AC

#GCAGAAAA+10 +10 17544 ?

!+0

!GACTCTGCAC+10 GTAAATCGAG+10 TCGTACAAAC+10 ACGCTTCGCG+10 GCACGGCCGA+10 GG

#GTGCCACA+10 +10 17604 ?

!+0

!AGCAGCACCA+10 GTGCCCCGCC+10 GCCAGGAGAG+10 ACCGGGAGGT+10 CTCTCGCTCG+10 GC

#GGACGCGA+10 +10 17664 ?

!+0

!GGTCGGCCGG+10 CAGGTGTCGG+10 GACAGCCAGG+10 ATAACAGTTC+10 TTTCTCGATC+10 AC

#GAAACGCA+10 +10 17724 ?

!+0

!TATTCTCGCT+10 CTGCATGGTA+10 CGGCTCTCGT+10 CCTCGAAGCG+10 GTCACCGTCC+10 AG

#AGAGTCGA+10 +10 17784 ?

!+0

!GCCAGAAATC+10 GCCCTCGATC+10 CCTTCCATTG+10 CCTCCTCTAA+10 TTCTCCCAAC+10 CC

#GTTGCCGT+10 +10 17844 ?

!+0

!TATTCGGGTC+10 AGTGGGGGAG+10 TTGGCGACGC+10 TCTCCGTCGA+10 CGCCCACCGC+10 GG

#CCTCAAAC+10 +10 17904 ?

!+0

!CTAGGCCGCG+10 CGTCGCCCCG+10 CTGGCCCCCA+10 GAAAAGCCGA+10 ACGTAGCCGT+10 TC

#GTTGGCAG+10 +10 17964 ?

!+0

!CAATCAGCGC+10 GTTGCGGCGG+10 TCTCTCGCTG+10 ACGTGAACTC+10 TCCGTAACCG+10 TC

#CTTGAGTT+10 +10 18024 ?

!+0

!CGGACGATAT+10 CTCGACTAAC+10 TCGCGCCAGA+10 GCCGCGAGGC+10 GATCCGAATG+10 CA

#CGGGTCTA+10 +10 18084 ?

!+0

!CCGAGTCGGC+10 CGACTCCGAC+10 GAGGCGACAG+10 CGGCACCTTG+10 CCGCCTGCGC+10 TC

#GCCACGAG+10 +10 18144 ?

!+0

!GTACCGCGTG+10 CGCAGTAATG+10 TGATCGCTGT+10 CCATCAGCGC+10 CAGCGGGTAG+10 CA

#CCCGTCGA+10 +10 18204 ?

!+0

!GCATGTTTTTC+10 CATTTAGGGA+10 TGTGTCTAGA+10 GGAGAGCGGT+10 CCGGGCGGTC+10 TA

#CTGCGGTT+10 +10 18264 ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34  
279 PM

!+0

!GTGCTGGGCC+10 GAGTTGGACG+10 GCTACGGATT+10 GCGCCGGGCG+10 TGAAGGGGGG+10 GG  
#GGCGGCGG+10 +10 18324 ?

!+0

!GATGTCCGGC+10 GGTCGCAAAG+10 GGGCGCGCGT+10 CCGCTTCTGC+10 GTGAAGGCTG+10 AG  
#CGGGAAG+10 +10 18384 ?

!+0

!AAGTTCTGGA+10 TGAGAATGGA+10 TCGAGCGGGC+10 AATAAATGTC+10 CAGAGTAGGG+10 GG  
#GTGGGAGG+10 +10 18444 ?

!+0

!GAGGGGAGG+10 TTCTGCCCCG+10 CGTCTCCTCT+10 ATCTGCTCGT+10 CGAGGCCTCG+10 GC  
#CTTGCCTC+10 +10 18504 ?

!+0

!GCCGTGCAGG+10 GGTCGAGGCC+10 GCTTCTTCTT+10 TTTTACTTCT+10 CTCTCGGAT+10 TC  
#CTCGTCAG+10 +10 18564 ?

!+0

!AGGAAGAAGA+10 AAATGACAAC+10 CTCCGTCTTT+10 TAAGAGTGCG+10 CCTACCCGCC+10 CT  
#GGCGGCCG+10 +10 18624 ?

!+0

!AAGCCTTCCG+10 TGGGTCTTTG+10 CGGGTGCCGC+10 GCACCGCAAT+10 AACGCACGGA+10 CG  
#CGGGGGAT+10 +10 18684 ?

!+0

!AGCAAATGGC+10 GGCGGCGCCG+10 GAGAGCTGTC+10 GTCAATAAAG+10 TCTAAGTCAG+10 AT  
#TGCGTGGG+10 +10 18744 ?

!+0

!CTCTGACTCG+10 GTGGAGCTGT+10 GTCCCGTGTC+10 CTCCTCGCCC+10 AAGTCCACTC+10 CC  
#CGGCACCC+10 +10 18804 ?

!+0

!AGGCTGCTCT+10 TCCTCCGACT+10 CCGGGTCGCT+10 CCAGCTCCTC+10 CCGCGTGCCG+10 GT  
#TCTTCGTC+10 +10 18864 ?

!+0

!CTCCGATACG+10 TCCGAAAAGA+10 AAACTTCTG+10 GGAGAGCTCT+10 TCGGGATCC+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 18913 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:60: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

280

PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 278+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:

#+10 SEQ+10 ID+10 NO:60: ?

!+0

!Met+10 Glu+10 Asn+10 Met+10 Leu+10 Asp+10 Gly+10 Cys+10 Tyr+10 Pro+10 Le

#u+10 Ala+10 Leu+10 Met+10 Asp+10 Ser ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Asp+10 His+10 Ile+10 Thr+10 Ala+10 His+10 Ala+10 Val+10 Pro+10 Arg+10 Gl

#y+10 Glu+10 Arg+10 Arg+10 Arg+10 Gln ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Gly+10 Ala+10 Ala+10 Val+10 Ala+10 Ser+10 Ser+10 Glu+10 Ser+10 Ala+10 As

#p+10 Ser+10 Val+10 Asp+10 Pro+10 Cys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Ile+10 Arg+10 Ile+10 Ala+10 Ser+10 Arg+10 Leu+10 Trp+10 Arg+10 Glu+10 Le

#u+10 Val+10 Glu+10 Ile+10 Ser+10 Ser ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Glu+10 Leu+10 Lys+10 Asp+10 Gly+10 Tyr+10 Gly+10 Glu+10 Phe+10 Thr+10 Se

#r+10 Ala+10 Arg+10 Asp+10 Arg+10 Arg ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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281

PM

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Asn+10 Ala+10 Leu+10 Ile+10 Ala+10 Ala+10 Asn+10 Glu+10 Arg+10 Leu+10 Ar

#g+10 Ser+10 Ala+10 Phe+10 Leu+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Ala+10 Ser+10 Arg+10 Ala+10 Thr+10 Arg+10 Gly+10 Leu+10 Gly+10 Leu+10 Ar

#g+10 Pro+10 Arg+10 Trp+10 Ala+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Thr+10 Glu+10 Ser+10 Val+10 Ala+10 Asn+10 Ser+10 Pro+10 Thr+10 Asp+10 Pr

#o+10 Asn+10 Asn+10 Gly+10 Asn+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Leu+10 Gly+10 Glu+10 Leu+10 Glu+10 Glu+10 Ala+10 Met+10 Glu+10 Gly+10 Il

#e+10 Glu+10 Gly+10 Asp+10 Phe+10 Trp ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Leu+10 Asp+10 Ser+10 Leu+10 Asp+10 Gly+10 Asp+10 Arg+10 Phe+10 Glu+10 As

#p+10 Glu+10 Ser+10 Arg+10 Thr+10 Met ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Gln+10 Ser+10 Glu+10 Asn+10 Met+10 Arg+10 Phe+10 Val+10 Ile+10 Glu+10 Ly

#s+10 Glu+10 Leu+10 Leu+10 Ser+10 Trp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

282

PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Leu+10 Ser+10 Arg+10 His+10 Leu+10 Pro+10 Ala+10 Asp+10 Leu+10 Ala+10 Se

#r+10 Ala+10 Glu+10 Arg+10 Glu+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Ser+10 Arg+10 Ser+10 Leu+10 Leu+10 Ala+10 Ala+10 Gly+10 His+10 Trp+10 Cy

#s+10 Cys+10 Leu+10 Trp+10 His+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Arg+10 Pro+10 Cys+10 Arg+10 Glu+10 Ala+10 Cys+10 Leu+10 Tyr+10 Asp+10 Se

#r+10 Ile+10 Tyr+10 Val+10 Gln+10 Ser ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Leu+10 Phe+10 Cys+10 Val+10 Gly+10 Thr+10 Gly+10 Arg+10 Val+10 Pro+10 Gl

#n+10 Ser+10 Glu+10 Met+10 Arg+10 Arg ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Arg+10 Glu+10 Tyr+10 Leu+10 Ala+10 Ala+10 Leu+10 Arg+10 Ala+10 Gly+10 Al

#a+10 Ala+10 Ala+10 Ala+10 Asn+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Pro+10 Glu+10 Val+10 Ser+10 Ala+10 Ser+10 Ile+10 Phe+10 Ala+10 Arg+10 As

#p+10 Ala+10 Gly+10 Ile+10 Ala+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

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283 PM

!+0

!Ala+10 Leu+10 Ala+10 Arg+10 Arg+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 275 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:61: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 294+10 amino+10  
#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:61: ?

!+0

!Met+10 Ser+10 Lys+10 Cys+10 Tyr+10 Cys+10 Leu+10 Ala+10 Arg+10 His+10 Le  
#u+10 Tyr+10 Lys+10 Ser+10 Pro+10 Arg ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Cys+10 Val+10 Gly+10 Arg+10 Arg+10 Val+10 Ala+10 Phe+10 Gly+10 Gly+10 Le  
#u+10 Ala+10 Thr+10 Met+10 Ser+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Pro+10 Pro+10 Thr+10 Ser+10 His+10 Leu+10 Asp+10 Leu+10 Ala+10 Phe+10 Se  
#r+10 Ala+10 Ala+10 Phe+10 Arg+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Thr+10 Asp+10 Leu+10 Pro+10 Gly+10 Gly+10 Arg+10 Phe+10 Trp+10 Arg+10 Al  
#a+10 Ser+10 Gln+10 Ser+10 Cys+10 Asp ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

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PM

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Ile+10 Phe+10 Phe+10 Trp+10 Pro+10 Asp+10 Leu+10 Ala+10 Ala+10 Val+10 Il

#e+10 Val+10 Gln+10 Ala+10 Ala+10 Arg ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Ala+10 Tyr+10 Phe+10 Glu+10 Gly+10 Lys+10 Glu+10 Arg+10 Leu+10 Gly+10 Se

#r+10 Leu+10 Gln+10 Val+10 Ala+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Asp+10 Ile+10 Thr+10 Ala+10 His+10 Asp+10 Pro+10 Arg+10 Ile+10 Ala+10 Pr

#o+10 Ala+10 Ala+10 Lys+10 Arg+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Val+10 Ala+10 Ala+10 Ala+10 Val+10 Gly+10 Leu+10 Trp+10 Thr+10 Ala+10 Le

#u+10 Ser+10 Glu+10 Leu+10 Val+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Gly+10 Pro+10 Asn+10 Gly+10 Glu+10 Leu+10 Glu+10 Ser+10 Lys+10 Val+10 Tr

#p+10 Gly+10 Lys+10 Gln+10 Ile+10 Pro ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Arg+10 Ala+10 Ala+10 Ala+10 Trp+10 Glu+10 Ile+10 Arg+10 Asp+10 Val+10 Pr

#o+10 Lys+10 Val+10 Pro+10 Val+10 Ile ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1



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285

PM

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Gly+10 Pro+10 Asp+10 Ile+10 Leu+10 Ser+10 Phe+10 Phe+10 Ser+10 Ala+10 Al

#a+10 Val+10 Glu+10 Leu+10 Pro+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Leu+10 Tyr+10 Ile+10 Arg+10 Ala+10 Arg+10 Gly+10 Gly+10 Ala+10 His+10 Se

#r+10 Arg+10 Ser+10 Ala+10 His+10 Trp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Asn+10 Asn+10 Gln+10 Ser+10 Ser+10 Ala+10 Pro+10 Ala+10 Ala+10 Gly+10 Le

#u+10 Ala+10 Ala+10 Ile+10 Arg+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Gly+10 Met+10 Glu+10 Met+10 Val+10 Arg+10 Ser+10 Leu+10 Leu+10 Val+10 Il

#e+10 Ala+10 Leu+10 Pro+10 Leu+10 Ser ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Asn+10 Phe+10 Thr+10 Leu+10 Pro+10 Glu+10 Asp+10 Leu+10 Pro+10 Glu+10 Gl

#y+10 Ser+10 Gln+10 Asn+10 Ser+10 Ile ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Arg+10 Ala+10 Phe+10 Val+10 Ala+10 His+10 Leu+10 Met+10 Asn+10 Cys+10 Va

#l+10 Ala+10 Thr+10 Asp+10 Lys+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Met+10 Ser+10 Pro+10 Asp+10 Val+10 Arg+10 Val+10 Pro+10 Val+10 Glu+10 Gl

#u+10 Ser+10 Phe+10 Tyr+10 Ser+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Cys+10 Leu+10 Arg+10 Glu+10 Ile+10 Ile+10 Met+10 Cys+10 Glu+10 Arg+10 Al

#a+10 Phe+10 Cys+10 Tyr+10 Pro+10 Cys ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Asn+10 Pro+10 Pro+10 Pro+10 Lys+10 Trp ?

!+10 +10 +10 +10 290 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:62: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 229+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:62: ?

!+0

!Met+10 Ala+10 Pro+10 Val+10 Lys+10 Val+10 Thr+10 Ile+10 Val+10 Ser+10 Al

#a+10 Val+10 Asp+10 Ser+10 His+10 Tyr ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Lys+10 Leu+10 Pro+10 Asn+10 Ser+10 Arg+10 Phe+10 Glu+10 Leu+10 Ser+10 As

#p+10 Ser+10 Gly+10 Trp+10 Lys+10 Glu ?



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PM

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 125 ?  
!+0  
!Pro+10 Ala+10 Pro+10 Lys+10 Thr+10 Phe+10 Leu+10 Ile+10 Thr+10 Glu+10 Th  
#r+10 Gly+10 Gly+10 Lys+10 Asn+10 Phe ?  
!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 140 ?  
!+0  
!Glu+10 Arg+10 Gly+10 Val+10 Glu+10 Ile+10 Phe+10 Leu+10 Val+10 Asn+10 Gl  
#y+10 Asp+10 Lys+10 Thr+10 Thr+10 Leu ?  
!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#60 ?  
!+0  
!Ser+10 Leu+10 Ser+10 His+10 Pro+10 Ser+10 Val+10 Trp+10 Thr+10 Thr+10 Le  
#u+10 Ala+10 Pro+10 Ser+10 Ser+10 Leu ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?  
!+0  
!Arg+10 Thr+10 Pro+10 Trp+10 Pro+10 Tyr+10 Ser+10 Thr+10 Val+10 Lys+10 Ph  
#e+10 Leu+10 Lys+10 Val+10 Lys+10 Pro ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?  
!+0  
!Asn+10 Ser+10 Ala+10 Ala+10 Tyr+10 Cys+10 Val+10 Ser+10 Asp+10 Ser+10 As  
#p+10 Asp+10 Gly+10 Glu+10 Arg+10 Gln ?  
!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 205 ?  
!+0  
!Pro+10 Lys+10 Phe+10 Phe+10 Leu+10 Gly+10 Ser+10 Leu+10 Phe+10 Lys+10 Se  
#r+10 Lys+10 Lys+10 Pro+10 Arg+10 Ser ?  
!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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289 PM

#+10 +10 +10 220 ?

!+0

!Pro+10 Arg+10 Arg+10 Arg+10 Arg ?

!225 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:63: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 476+10 amino+10  
#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:63: ?

!+0

!Met+10 Arg+10 Phe+10 Arg+10 Arg+10 Ile+10 Cys+10 Ser+10 Arg+10 Ser+10 Ar

#g+10 Ala+10 Glu+10 Lys+10 Arg+10 Arg ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Arg+10 Thr+10 Thr+10 Glu+10 Asn+10 Pro+10 Leu+10 Thr+10 Ser+10 Lys+10 Ar

#g+10 Val+10 Cys+10 Val+10 Leu+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Ser+10 Phe+10 Ser+10 Arg+10 Thr+10 Met+10 Ser+10 Leu+10 Arg+10 Pro+10 Ty

#r+10 Ala+10 Glu+10 Ile+10 Leu+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Thr+10 Ala+10 Glu+10 Gly+10 Val+10 Glu+10 Arg+10 Leu+10 Ala+10 Glu+10 Le

#u+10 Val+10 Ser+10 Val+10 Thr+10 Met ?

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PM

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Thr+10 Glu+10 Arg+10 Ala+10 Glu+10 Pro+10 Val+10 Thr+10 Glu+10 Asn+10 Th

#r+10 Ala+10 Val+10 Asn+10 Ser+10 Ile ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Pro+10 Pro+10 Ala+10 Asn+10 Glu+10 Asn+10 Gly+10 Gln+10 Asn+10 Phe+10 Al

#a+10 Tyr+10 Ala+10 Gly+10 Asp+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Pro+10 Ser+10 Thr+10 Thr+10 Glu+10 Lys+10 Val+10 Asp+10 Gly+10 Ser+10 Hi

#s+10 Thr+10 Asp+10 Phe+10 Asp+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Ala+10 Ser+10 Ser+10 Asp+10 Tyr+10 Ala+10 Gly+10 Pro+10 Val+10 Pro+10 Le

#u+10 Ala+10 Gln+10 Thr+10 Arg+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Lys+10 His+10 Ser+10 Asp+10 Glu+10 Phe+10 Leu+10 Gln+10 His+10 Phe+10 Ar

#g+10 Val+10 Leu+10 Asp+10 Asp+10 Leu ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Val+10 Glu+10 Gly+10 Ala+10 Tyr+10 Gly+10 Phe+10 Ile+10 Cys+10 Asp+10 Va

#l+10 Arg+10 Arg+10 Tyr+10 Thr+10 Glu ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

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PM

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Glu+10 Glu+10 Gln+10 Arg+10 Arg+10 Arg+10 Gly+10 Val+10 Asn+10 Ser+10 Th

#r+10 Asn+10 Gln+10 Gly+10 Lys+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Lys+10 Cys+10 Lys+10 Arg+10 Leu+10 Ile+10 Ala+10 Lys+10 Tyr+10 Val+10 Ly

#s+10 Asn+10 Gly+10 Thr+10 Arg+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Ala+10 Ser+10 Gln+10 Leu+10 Glu+10 Asn+10 Glu+10 Ile+10 Leu+10 Val+10 Le

#u+10 Gly+10 Arg+10 Leu+10 Asn+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Glu+10 Asn+10 Val+10 Leu+10 Lys+10 Ile+10 Gln+10 Glu+10 Ile+10 Leu+10 Ar

#g+10 Tyr+10 Pro+10 Asp+10 Asn+10 Thr ?

!+10 +10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Tyr+10 Met+10 Leu+10 Thr+10 Gln+10 Arg+10 Tyr+10 Gln+10 Phe+10 Asp+10 Le

#u+10 Tyr+10 Ser+10 Tyr+10 Met+10 Tyr ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Asp+10 Glu+10 Ala+10 Phe+10 Asp+10 Trp+10 Lys+10 Asp+10 Ser+10 Pro+10 Me

#t+10 Leu+10 Lys+10 Gln+10 Thr+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?  
!+0  
!Arg+10 Ile+10 Met+10 Lys+10 Gln+10 Leu+10 Met+10 Ser+10 Ala+10 Val+10 Se  
#r+10 Tyr+10 Ile+10 His+10 Ser+10 Lys ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?  
!+0  
!Lys+10 Leu+10 Ile+10 His+10 Arg+10 Asp+10 Ile+10 Lys+10 Leu+10 Glu+10 As  
#n+10 Ile+10 Phe+10 Leu+10 Asn+10 Cys ?  
!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 285 ?  
!+0  
!Asp+10 Gly+10 Lys+10 Thr+10 Val+10 Leu+10 Gly+10 Asp+10 Phe+10 Gly+10 Th  
#r+10 Val+10 Thr+10 Pro+10 Phe+10 Glu ?  
!+10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 300 ?  
!+0  
!Asn+10 Glu+10 Arg+10 Glu+10 Pro+10 Phe+10 Glu+10 Tyr+10 Gly+10 Trp+10 Va  
#l+10 Gly+10 Thr+10 Val+10 Ala+10 Thr ?  
!305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3  
#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3  
#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3  
#20 ?  
!+0  
!Asn+10 Ser+10 Pro+10 Glu+10 Ile+10 Leu+10 Ala+10 Arg+10 Asp+10 Ser+10 Ty  
#r+10 Cys+10 Glu+10 Ile+10 Thr+10 Asp ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335 ?  
!+0  
!Ile+10 Trp+10 Ser+10 Cys+10 Gly+10 Val+10 Val+10 Leu+10 Leu+10 Glu+10 Me  
#t+10 Val+10 Ser+10 His+10 Glu+10 Phe ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10 +10



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PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?

!+0

!Cys+10 Pro+10 Ile+10 Gly+10 Asp+10 Gly+10 Gly+10 Gly+10 Asn+10 Pro+10 Hi

#s+10 Gln+10 Gln+10 Leu+10 Leu+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 365 ?

!+0

!Val+10 Ile+10 Asp+10 Ser+10 Leu+10 Ser+10 Val+10 Cys+10 Asp+10 Glu+10 Gl

#u+10 Phe+10 Pro+10 Asp+10 Pro+10 Pro ?

!+10 +10 +10 +10 370+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 380 ?

!+0

!Cys+10 Asn+10 Leu+10 Tyr+10 Asn+10 Tyr+10 Leu+10 His+10 Tyr+10 Ala+10 Se

#r+10 Ile+10 Asp+10 Arg+10 Ala+10 Gly ?

!385+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#00 ?

!+0

!His+10 Thr+10 Val+10 Pro+10 Ser+10 Leu+10 Ile+10 Arg+10 Asn+10 Leu+10 Hi

#s+10 Leu+10 Pro+10 Ala+10 Asp+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 405+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415 ?

!+0

!Glu+10 Tyr+10 Pro+10 Leu+10 Val+10 Lys+10 Met+10 Leu+10 Thr+10 Phe+10 As

#p+10 Trp+10 Arg+10 Leu+10 Arg+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430 ?

!+0

!Ser+10 Ala+10 Ala+10 Glu+10 Val+10 Leu+10 Ala+10 Met+10 Pro+10 Leu+10 Ph

#e+10 Ser+10 Ala+10 Glu+10 Glu+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 435+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 440+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 445 ?

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PM

!+0

!Arg+10 Thr+10 Ile+10 Thr+10 Ile+10 Ile+10 His+10 Gly+10 Lys+10 His+10 Ly

#s+10 Pro+10 Ile+10 Arg+10 Pro+10 Glu ?

!+10 +10 +10 +10 450+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 455+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 460 ?

!+0

!Ile+10 Arg+10 Ala+10 Arg+10 Val+10 Pro+10 Arg+10 Ser+10 Met+10 Ser+10 Gl

#u+10 Gly ?

!465+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#75 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:64: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 623+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0,

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:64: ?

!+0

!Met+10 Thr+10 Leu+10 Pro+10 His+10 Arg+10 Leu+10 Thr+10 Lys+10 Arg+10 Pr

#o+10 Phe+10 Ala+10 Arg+10 Arg+10 Phe ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Cys+10 Ser+10 Val+10 Phe+10 Val+10 Ile+10 His+10 Tyr+10 Ser+10 Glu+10 Th

#r+10 Lys+10 Leu+10 Asp+10 Arg+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

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PM

!Asn+10 Lys+10 Thr+10 Met+10 Leu+10 Leu+10 Tyr+10 Arg+10 Pro+10 Asp+10 Se

#r+10 Thr+10 Met+10 Arg+10 His+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Gly+10 Gly+10 Asp+10 Ala+10 Asn+10 His+10 Arg+10 Gly+10 Ile+10 Arg+10 Pr

#o+10 Arg+10 Arg+10 Lys+10 Ser+10 Ile ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Gly+10 Ala+10 Phe+10 Ser+10 Ala+10 Arg+10 Glu+10 Lys+10 Thr+10 Gly+10 Ly

#s+10 Arg+10 Asn+10 Ala+10 Leu+10 Thr ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Glu+10 Ser+10 Ser+10 Ser+10 Ser+10 Ser+10 Asp+10 Met+10 Leu+10 Asp+10 Pr

#o+10 Phe+10 Ser+10 Thr+10 Asp+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Glu+10 Phe+10 Gly+10 Gly+10 Lys+10 Trp+10 Thr+10 Val+10 Asp+10 Gly+10 Pr

#o+10 Ala+10 Asp+10 Ile+10 Thr+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Glu+10 Val+10 Leu+10 Ser+10 Gln+10 Ala+10 Trp+10 Asp+10 Val+10 Leu+10 Gl

#n+10 Leu+10 Val+10 Lys+10 His+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 125 ?

!+0

!Asp+10 Ala+10 Glu+10 Glu+10 Glu+10 Arg+10 Val+10 Thr+10 Tyr+10 Glu+10 Se

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PM

#r+10 Lys+10 Pro+10 Thr+10 Pro+10 Ile ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Gln+10 Pro+10 Phe+10 Asn+10 Ala+10 Trp+10 Pro+10 Asp+10 Gly+10 Pro+10 Se

#r+10 Trp+10 Asn+10 Ala+10 Gln+10 Asp ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Phe+10 Thr+10 Arg+10 Ala+10 Pro+10 Ile+10 Val+10 Tyr+10 Pro+10 Ser+10 Al

#a+10 Glu+10 Val+10 Leu+10 Asp+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Glu+10 Ala+10 Leu+10 Lys+10 Val+10 Gly+10 Ala+10 Phe+10 Val+10 Ser+10 Ar

#g+10 Val+10 Leu+10 Gln+10 Cys+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Pro+10 Phe+10 Thr+10 Arg+10 Ser+10 Lys+10 Lys+10 Ser+10 Val+10 Thr+10 Va

#l+10 Arg+10 Asp+10 Ala+10 Gln+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Phe+10 Leu+10 Gly+10 Asp+10 Ser+10 Phe+10 Trp+10 Arg+10 Ile+10 Met+10 Gl

#n+10 Asn+10 Val+10 Tyr+10 Thr+10 Val ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Val+10 Leu+10 Arg+10 Gln+10 His+10 Ile+10 Thr+10 Arg+10 Leu+10 Arg+10 Hi

#s+10 Pro+10 Ser+10 Ser+10 Lys+10 Ser ?

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297

PM

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Ile+10 Val+10 Asn+10 Cys+10 Asn+10 Asp+10 Pro+10 Leu+10 Trp+10 Tyr+10 Al

#a+10 Tyr+10 Ala+10 Asn+10 Gln+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!His+10 Trp+10 Arg+10 Gly+10 Met+10 Arg+10 Val+10 Pro+10 Ser+10 Leu+10 Ly

#s+10 Leu+10 Ala+10 Ser+10 Pro+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Glu+10 Glu+10 Asn+10 Ile+10 Gln+10 His+10 Gly+10 Pro+10 Met+10 Ala+10 Al

#a+10 Val+10 Phe+10 Arg+10 Asn+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Gly+10 Ala+10 Gly+10 Leu+10 Phe+10 Leu+10 Trp+10 Pro+10 Ala+10 Met+10 Ar

#g+10 Ala+10 Ala+10 Phe+10 Glu+10 Glu ?

!+10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 300 ?

!+0

!Arg+10 Asp+10 Lys+10 Arg+10 Leu+10 Leu+10 Arg+10 Ala+10 Cys+10 Leu+10 Se

#r+10 Ser+10 Leu+10 Asp+10 Ile+10 Met ?

!305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#20 ?

!+0

!Asp+10 Ala+10 Ala+10 Val+10 Leu+10 Ala+10 Ser+10 Phe+10 Pro+10 Phe+10 Ty

#r+10 Trp+10 Arg+10 Gly+10 Val+10 Gln ?

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PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335 ?

!+0

!Asp+10 Thr+10 Ser+10 Arg+10 Phe+10 Glu+10 Pro+10 Ala+10 Leu+10 Gly+10 Cy

#s+10 Leu+10 Ser+10 Glu+10 Tyr+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?

!+0

!Ala+10 Leu+10 Val+10 Val+10 Leu+10 Leu+10 Ala+10 Glu+10 Thr+10 Val+10 Le

#u+10 Ala+10 Thr+10 Met+10 Phe+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 365 ?

!+0

!His+10 Ala+10 Leu+10 Val+10 Phe+10 Met+10 Arg+10 Ala+10 Leu+10 Ala+10 As

#p+10 Gly+10 Asn+10 Phe+10 Asp+10 Asp ?

!+10 +10 +10 +10 +10 370+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 380 ?

!+0

!Tyr+10 Asp+10 Glu+10 Thr+10 Arg+10 Tyr+10 Ile+10 Asp+10 Pro+10 Val+10 Ly

#s+10 Asn+10 Glu+10 Tyr+10 Leu+10 Asn ?

!385+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#00 ?

!+0

!Gly+10 Ala+10 Glu+10 Gly+10 Thr+10 Leu+10 Leu+10 Arg+10 Gly+10 Ile+10 Va

#l+10 Ala+10 Ser+10 Asn+10 Thr+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 405+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415 ?

!+0

!Leu+10 Ala+10 Val+10 Val+10 Cys+10 Ala+10 Asn+10 Thr+10 Tyr+10 Ser+10 Th

#r+10 Ile+10 Arg+10 Lys+10 Leu+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420+10 +10 +10 +10 +10 +10

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

299

PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430 ?

!+0

!Ser+10 Val+10 Ala+10 Thr+10 Ser+10 Ala+10 Cys+10 Asn+10 Val+10 Ala+10 Ty

#r+10 Arg+10 Thr+10 Glu+10 Thr+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 435+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 440+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 445 ?

!+0

!Lys+10 Ala+10 Arg+10 Arg+10 Pro+10 Gly+10 Met+10 Ser+10 Asp+10 Ile+10 Ty

#r+10 Arg+10 Ile+10 Leu+10 Gln+10 Lys ?

!+10 +10 +10 +10 450+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 455+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 460 ?

!+0

!Glu+10 Phe+10 Phe+10 Phe+10 Tyr+10 Ile+10 Ala+10 Trp+10 Leu+10 Gln+10 Ar

#g+10 Val+10 Ala+10 Thr+10 His+10 Ala ?

!465+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#80 ?

!+0

!Asn+10 Phe+10 Cys+10 Leu+10 Asn+10 Ile+10 Leu+10 Lys+10 Arg+10 Ser+10 Va

#l+10 Asp+10 Thr+10 Gly+10 Ala+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 485+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 490+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 495 ?

!+0

!Pro+10 Phe+10 Leu+10 Phe+10 Arg+10 Ala+10 Ser+10 Ser+10 Glu+10 Lys+10 Ar

#g+10 Leu+10 Gln+10 Gln+10 Leu+10 Asn ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 500+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 505+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 510 ?

!+0

!Lys+10 Met+10 Leu+10 Cys+10 Pro+10 Leu+10 Leu+10 Val+10 Pro+10 Ile+10 Gl

#n+10 Tyr+10 Glu+10 Asp+10 Phe+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 515+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 520+10 +10 +10 +10 +10 +10 +10 +10 +10

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

300

PM

#+10 +10 +10 +10 +10 +10 +10 525 ?

!+0

!Lys+10 Ala+10 Met+10 Gly+10 Ser+10 Glu+10 Leu+10 Lys+10 Arg+10 Glu+10 Ly

#s+10 Leu+10 Glu+10 Thr+10 Phe+10 Val ?

!+10 +10 +10 +10 530+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 535+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 540 ?

!+0

!Lys+10 Ala+10 Ile+10 Ser+10 Ser+10 Asp+10 Arg+10 Asp+10 Pro+10 Arg+10 Gl

#y+10 Ser+10 Leu+10 Arg+10 Phe+10 Leu ?

!545+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#60 ?

!+0

!Ile+10 Ser+10 Asp+10 His+10 Ala+10 Arg+10 Glu+10 Ile+10 Ile+10 Ala+10 As

#p+10 Gly+10 Val+10 Arg+10 Phe+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 565+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 570+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 575 ?

!+0

!Pro+10 Val+10 Ile+10 Asp+10 Glu+10 Pro+10 Val+10 Arg+10 Ala+10 Ser+10 Va

#l+10 Ala+10 Leu+10 Ser+10 Thr+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 580+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 585+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 590 ?

!+0

!Ala+10 Ala+10 Gly+10 Lys+10 Val+10 Lys+10 Ala+10 Arg+10 Arg+10 Leu+10 Th

#r+10 Ser+10 Val+10 Arg+10 Ala+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 595+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 600+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 605 ?

!+0

!Val+10 Pro+10 Gly+10 Ala+10 Gly+10 Ala+10 Val+10 Ser+10 Ala+10 Arg+10 Ar

#g+10 Lys+10 Ser+10 Glu+10 Ile ?

!+10 +10 +10 +10 610+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 615+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 620 ?



DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34  
301 PM

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:65: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 292+10 amino+10  
#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:65: ?

!+0

!Met+10 Ser+10 Gly+10 Phe+10 Ser+10 Asn+10 Ile+10 Gly+10 Ser+10 Ile+10 Al

#a+10 Thr+10 Val+10 Ser+10 Leu+10 Val ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Cys+10 Ser+10 Leu+10 Leu+10 Cys+10 Ala+10 Ser+10 Val+10 Leu+10 Gly+10 Al

#a+10 Pro+10 Val+10 Leu+10 Asp+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Leu+10 Glu+10 Ser+10 Ser+10 Pro+10 Phe+10 Pro+10 Phe+10 Gly+10 Gly+10 Ly

#s+10 Ile+10 Ile+10 Ala+10 Gln+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Cys+10 Asn+10 Arg+10 Thr+10 Thr+10 Ile+10 Glu+10 Val+10 Thr+10 Val+10 Pr

#o+10 Trp+10 Ser+10 Asp+10 Tyr+10 Ser ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

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302

PM

!Gly+10 Arg+10 Thr+10 Glu+10 Gly+10 Val+10 Ser+10 Val+10 Glu+10 Val+10 Ly

#s+10 Trp+10 Phe+10 Tyr+10 Gly+10 Asn ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Ser+10 Asn+10 Pro+10 Glu+10 Ser+10 Phe+10 Val+10 Phe+10 Gly+10 Val+10 As

#p+10 Ser+10 Glu+10 Thr+10 Gly+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Gly+10 His+10 Glu+10 Asp+10 Leu+10 Ser+10 Thr+10 Cys+10 Trp+10 Ala+10 Le

#u+10 Ile+10 His+10 Asn+10 Leu+10 Asn ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Ala+10 Ser+10 Val+10 Cys+10 Arg+10 Ala+10 Ser+10 Asp+10 Ala+10 Gly+10 Il

#e+10 Pro+10 Asp+10 Phe+10 Asp+10 Lys ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Gln+10 Cys+10 Glu+10 Lys+10 Val+10 Gln+10 Arg+10 Arg+10 Leu+10 Arg+10 Se

#r+10 Gly+10 Val+10 Glu+10 Leu+10 Gly ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Ser+10 Tyr+10 Val+10 Ser+10 Gly+10 Asn+10 Gly+10 Ser+10 Leu+10 Val+10 Le

#u+10 Tyr+10 Pro+10 Gly+10 Met+10 Tyr ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

303

PM

!Asp+10 Ala+10 Gly+10 Ile+10 Tyr+10 Ala+10 Tyr+10 Gln+10 Leu+10 Ser+10 Va  
#l+10 Gly+10 Gly+10 Lys+10 Gly+10 Tyr ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?  
!+0  
!Thr+10 Gly+10 Ser+10 Val+10 Tyr+10 Leu+10 Asp+10 Val+10 Gly+10 Pro+10 As  
#n+10 Pro+10 Gly+10 Cys+10 His+10 Asp ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?  
!+0  
!Gln+10 Tyr+10 Gly+10 Tyr+10 Thr+10 Tyr+10 Tyr+10 Ser+10 Leu+10 Ala+10 As  
#p+10 Glu+10 Ala+10 Ser+10 Asp+10 Leu ?  
!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 205 ?  
!+0  
!Ser+10 Ser+10 Tyr+10 Asp+10 Val+10 Ala+10 Ser+10 Pro+10 Glu+10 Leu+10 As  
#p+10 Gly+10 Pro+10 Met+10 Glu+10 Glu ?  
!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 220 ?  
!+0  
!Asp+10 Tyr+10 Ser+10 Asn+10 Cys+10 Leu+10 Asp+10 Met+10 Pro+10 Pro+10 Le  
#u+10 Arg+10 Pro+10 Trp+10 Thr+10 Thr ?  
!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2  
#40 ?  
!+0  
!Val+10 Cys+10 Ser+10 His+10 Asp+10 Val+10 Glu+10 Glu+10 Gln+10 Glu+10 As  
#n+10 Ala+10 Thr+10 Asp+10 Glu+10 Leu ?  
!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?  
!+0  
!Tyr+10 Leu+10 Trp+10 Asp+10 Glu+10 Glu+10 Cys+10 Ala+10 Gly+10 Pro+10 Le

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304

PM

#u+10 Asp+10 Glu+10 Tyr+10 Val+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Glu+10 Arg+10 Ser+10 Glu+10 Thr+10 Met+10 Pro+10 Arg+10 Met+10 Val+10 Va

#l+10 Phe+10 Ser+10 Pro+10 Pro+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Thr+10 Leu+10 Gln+10 Gln ?

!+10 +10 +10 +10 290 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:66: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 985+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:66: ?

!+0

!Met+10 Gly+10 Thr+10 Met+10 Leu+10 Val+10 Leu+10 Arg+10 Leu+10 Phe+10 Le

#u+10 Leu+10 Ala+10 Val+10 Ala+10 Asp ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Ala+10 Ala+10 Leu+10 Pro+10 Thr+10 Gly+10 Arg+10 Phe+10 Cys+10 Arg+10 Va

#l+10 Trp+10 Lys+10 Val+10 Pro+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

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305

PM

!+0

!Gly+10 Gly+10 Thr+10 Ile+10 Gln+10 Glu+10 Asn+10 Leu+10 Ala+10 Val+10 Le  
#u+10 Ala+10 Glu+10 Ser+10 Pro+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Thr+10 Gly+10 His+10 Ala+10 Thr+10 Tyr+10 Pro+10 Pro+10 Pro+10 Glu+10 Gl  
#y+10 Ala+10 Val+10 Ser+10 Phe+10 Gln ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 60 ?

!+0

!Ile+10 Phe+10 Ala+10 Asp+10 Thr+10 Pro+10 Thr+10 Leu+10 Arg+10 Ile+10 Ar  
#g+10 Tyr+10 Gly+10 Ala+10 Thr+10 Glu ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 80 ?

!+0

!Asp+10 Glu+10 Leu+10 Ala+10 Leu+10 Glu+10 Arg+10 Gly+10 Thr+10 Ser+10 Al  
#a+10 Ser+10 Asp+10 Ala+10 Asp+10 Asn ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Val+10 Thr+10 Phe+10 Ser+10 Leu+10 Ser+10 Tyr+10 Arg+10 Pro+10 Arg+10 Pr  
#o+10 Glu+10 Ile+10 His+10 Gly+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Tyr+10 Phe+10 Thr+10 Ile+10 Gly+10 Val+10 Phe+10 Ala+10 Thr+10 Gly+10 Gl  
#n+10 Ser+10 Thr+10 Glu+10 Ser+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10  
#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

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306

PM

!Tyr+10 Ser+10 Val+10 Ile+10 Ser+10 Arg+10 Val+10 Leu+10 Val+10 Asn+10 Al

#a+10 Ser+10 Leu+10 Glu+10 Arg+10 Ser ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Val+10 Arg+10 Leu+10 Glu+10 Thr+10 Pro+10 Cys+10 Asp+10 Glu+10 Asn+10 Ph

#e+10 Leu+10 Gln+10 Asn+10 Glu+10 Pro ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Thr+10 Trp+10 Gly+10 Ser+10 Lys+10 Arg+10 Trp+10 Leu+10 Gly+10 Pro+10 Pr

#o+10 Ser+10 Pro+10 Tyr+10 Val+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Asp+10 Asn+10 Asp+10 Val+10 Ala+10 Val+10 Leu+10 Thr+10 Lys+10 Ala+10 Gl

#n+10 Tyr+10 Ile+10 Gly+10 Glu+10 Cys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Tyr+10 Ser+10 Asn+10 Ser+10 Ala+10 Ala+10 Gln+10 Thr+10 Gly+10 Leu+10 Th

#r+10 Ser+10 Leu+10 Asn+10 Met+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Phe+10 Phe+10 Tyr+10 Ser+10 Pro+10 Lys+10 Arg+10 Ile+10 Val+10 Asn+10 Va

#l+10 Thr+10 Trp+10 Thr+10 Thr+10 Gly ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Gly+10 Pro+10 Ser+10 Pro+10 Ser+10 Arg+10 Ile+10 Thr+10 Val+10 Tyr+10 Se

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307

PM

#r+10 Ser+10 Arg+10 Glu+10 Asn+10 Gly ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Gln+10 Pro+10 Val+10 Leu+10 Arg+10 Asn+10 Val+10 Ser+10 Asp+10 Gly+10 Ph

#e+10 Leu+10 Val+10 Lys+10 Tyr+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Pro+10 Asp+10 Ile+10 Asp+10 Gly+10 Arg+10 Ala+10 Met+10 Ile+10 Asn+10 Va

#l+10 Ile+10 Ala+10 Asn+10 Tyr+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Pro+10 Ala+10 Asp+10 Ser+10 Gly+10 Ser+10 Val+10 Leu+10 Ala+10 Phe+10 Th

#r+10 Ala+10 Phe+10 Arg+10 Glu+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Lys+10 Leu+10 Pro+10 Ser+10 Ala+10 Ile+10 Gln+10 Leu+10 His+10 Arg+10 Il

#e+10 Asp+10 Met+10 Ser+10 Gly+10 Thr ?

!+10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 300 ?

!+0

!Glu+10 Pro+10 Pro+10 Gly+10 Thr+10 Glu+10 Thr+10 Thr+10 Phe+10 Asp+10 Cy

#s+10 Gln+10 Lys+10 Met+10 Ile+10 Glu ?

!305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#20 ?

!+0

!Thr+10 Pro+10 Tyr+10 Arg+10 Ala+10 Leu+10 Gly+10 Ser+10 Asn+10 Val+10 Pr

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308

PM

#o+10 Arg+10 Asp+10 Asp+10 Ser+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335 ?

!+0

!Arg+10 Pro+10 Gly+10 Ala+10 Thr+10 Leu+10 Pro+10 Pro+10 Phe+10 Asp+10 Th

#r+10 Ala+10 Ala+10 Pro+10 Asp+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?

!+0

!Asp+10 Thr+10 Gly+10 Thr+10 Ser+10 Pro+10 Thr+10 Pro+10 Thr+10 Thr+10 Va

#l+10 Pro+10 Glu+10 Pro+10 Ala+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 365 ?

!+0

!Thr+10 Thr+10 Leu+10 Ile+10 Pro+10 Arg+10 Ser+10 Thr+10 Ser+10 Asp+10 Me

#t+10 Gly+10 Phe+10 Phe+10 Ser+10 Thr ?

!+10 +10 +10 +10 370+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 380 ?

!+0

!Ala+10 Arg+10 Ala+10 Thr+10 Gly+10 Ser+10 Glu+10 Thr+10 Leu+10 Ser+10 Va

#l+10 Pro+10 Val+10 Gln+10 Glu+10 Thr ?

!385+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#00 ?

!+0

!Asp+10 Arg+10 Thr+10 Leu+10 Ser+10 Thr+10 Thr+10 Pro+10 Leu+10 Thr+10 Le

#u+10 Pro+10 Leu+10 Thr+10 Pro+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 405+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415 ?

!+0

!Glu+10 Ser+10 Glu+10 Asn+10 Thr+10 Leu+10 Phe+10 Pro+10 Thr+10 Thr+10 Al

#a+10 Pro+10 Gly+10 Ile+10 Ser+10 Thr ?



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PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430 ?

!+0

!Glu+10 Thr+10 Pro+10 Ser+10 Ala+10 Ala+10 His+10 Glu+10 Thr+10 Thr+10 Gl

#n+10 Thr+10 Gln+10 Ser+10 Ala+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 435+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 440+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 445 ?

!+0

!Thr+10 Val+10 Val+10 Phe+10 Thr+10 Gln+10 Ser+10 Pro+10 Ser+10 Thr+10 Gl

#u+10 Ser+10 Glu+10 Thr+10 Ala+10 Arg ?

!+10 +10 +10 +10 450+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 455+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 460 ?

!+0

!Ser+10 Gln+10 Ser+10 Gln+10 Glu+10 Pro+10 Trp+10 Tyr+10 Phe+10 Thr+10 Gl

#n+10 Thr+10 Pro+10 Ser+10 Thr+10 Glu ?

!465+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#80 ?

!+0

!Gln+10 Ala+10 Ala+10 Leu+10 Thr+10 Gln+10 Thr+10 Gln+10 Ile+10 Ala+10 Gl

#u+10 Thr+10 Glu+10 Ala+10 Leu+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 485+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 490+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 495 ?

!+0

!Thr+10 Gln+10 Thr+10 Pro+10 Ser+10 Ala+10 Glu+10 Gln+10 Met+10 Thr+10 Ph

#e+10 Thr+10 Gln+10 Thr+10 Pro+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 500+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 505+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 510 ?

!+0

!Ala+10 Glu+10 Thr+10 Glu+10 Ala+10 Pro+10 Ala+10 Gln+10 Thr+10 Pro+10 Se

#r+10 Thr+10 Ile+10 Pro+10 Glu+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 515+10 +10 +10 +10 +10 +10 +10 +10

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310

PM

#+10 +10 +10 +10 +10 +10 +10 520+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 525 ?

!+0

!Phe+10 Thr+10 Gln+10 Ser+10 Arg+10 Ser+10 Thr+10 Pro+10 Pro+10 Glu+10 Th

#r+10 Ala+10 Arg+10 Ala+10 Pro+10 Ser ?

!+10 +10 +10 +10 530+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 535+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 540 ?

!+0

!Ala+10 Ala+10 Pro+10 Glu+10 Val+10 Phe+10 Thr+10 Gln+10 Ser+10 Ser+10 Se

#r+10 Thr+10 Val+10 Thr+10 Glu+10 Val ?

!545+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5

#60 ?

!+0

!Phe+10 Thr+10 Gln+10 Thr+10 Pro+10 Ser+10 Thr+10 Val+10 Pro+10 Lys+10 Th

#r+10 Thr+10 Leu+10 Ser+10 Ser+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 565+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 570+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 575 ?

!+0

!Thr+10 Glu+10 Pro+10 Ala+10 Ile+10 Phe+10 Thr+10 Arg+10 Thr+10 Gln+10 Se

#r+10 Ala+10 Gly+10 Thr+10 Glu+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 580+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 585+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 590 ?

!+0

!Phe+10 Thr+10 Gln+10 Thr+10 Ser+10 Ser+10 Ala+10 Glu+10 Pro+10 Asp+10 Th

#r+10 Met+10 Arg+10 Thr+10 Gln+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 595+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 600+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 605 ?

!+0

!Thr+10 Glu+10 Thr+10 His+10 Phe+10 Phe+10 Thr+10 Gln+10 Ala+10 Pro+10 Se

#r+10 Thr+10 Val+10 Pro+10 Lys+10 Ala ?

!+10 +10 +10 +10 610+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 615+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

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311

PM

#+10 +10 +10 620 ?

!+0

!Thr+10 Gln+10 Thr+10 Pro+10 Ser+10 Thr+10 Glu+10 Pro+10 Glu+10 Val+10 Le

#u+10 Thr+10 Gln+10 Ser+10 Pro+10 Ser ?

!625+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 6

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 6

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 6

#40 ?

!+0

!Thr+10 Glu+10 Pro+10 Val+10 Pro+10 Phe+10 Thr+10 Arg+10 Thr+10 Leu+10 Gl

#y+10 Ala+10 Glu+10 Pro+10 Glu+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 645+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 650+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 655 ?

!+0

!Thr+10 Gln+10 Thr+10 Pro+10 Ser+10 Ala+10 Ala+10 Pro+10 Glu+10 Val+10 Ty

#r+10 Thr+10 Arg+10 Ser+10 Ser+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 660+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 665+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 670 ?

!+0

!Thr+10 Met+10 Pro+10 Glu+10 Thr+10 Ala+10 Gln+10 Ser+10 Thr+10 Pro+10 Le

#u+10 Ala+10 Ser+10 Gln+10 Asn+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 675+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 680+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 685 ?

!+0

!Thr+10 Ser+10 Ser+10 Gly+10 Thr+10 Gly+10 Thr+10 His+10 Asn+10 Thr+10 Gl

#u+10 Pro+10 Arg+10 Thr+10 Tyr+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 690+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 695+10 +10 +10 +10 +10

#+10 +10 +10 700 ?

!+0

!Val+10 Gln+10 Thr+10 Thr+10 Pro+10 His+10 Thr+10 Gln+10 Lys+10 Leu+10 Ty

#r+10 Thr+10 Glu+10 Asn+10 Lys+10 Thr ?

!705+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 7

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 7

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 7

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34  
312 PM

#20 ?

!+0

!Leu+10 Ser+10 Phe+10 Pro+10 Thr+10 Val+10 Val+10 Ser+10 Glu+10 Phe+10 Hi

#s+10 Glu+10 Met+10 Ser+10 Thr+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 725+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 730+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 735 ?

!+0

!Glu+10 Ser+10 Gln+10 Thr+10 Pro+10 Leu+10 Leu+10 Asp+10 Val+10 Lys+10 Il

#e+10 Val+10 Glu+10 Val+10 Lys+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 740+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 745+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 750 ?

!+0

!Ser+10 Asn+10 Asp+10 Gly+10 Glu+10 Val+10 Thr+10 Ala+10 Thr+10 Cys+10 Va

#l+10 Ser+10 Thr+10 Val+10 Lys+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 755+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 760+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 765 ?

!+0

!Pro+10 Tyr+10 Arg+10 Val+10 Glu+10 Thr+10 Asn+10 Trp+10 Lys+10 Val+10 As

#p+10 Leu+10 Val+10 Asp+10 Val+10 Met ?

!+10 +10 +10 +10 770+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 775+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 780 ?

!+0

!Asp+10 Glu+10 Ile+10 Ser+10 Gly+10 Asn+10 Ser+10 Pro+10 Ala+10 Gly+10 Va

#l+10 Phe+10 Asn+10 Ser+10 Asn+10 Glu ?

!785+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 7

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 7

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 8

#00 ?

!+0

!Lys+10 Trp+10 Gln+10 Lys+10 Gln+10 Leu+10 Tyr+10 Tyr+10 Arg+10 Val+10 Th

#r+10 Asp+10 Gly+10 Arg+10 Thr+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 805+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 810+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 815 ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

313

PM

!+0

!Val+10 Gln+10 Leu+10 Met+10 Cys+10 Leu+10 Ser+10 Cys+10 Thr+10 Ser+10 Hi

#s+10 Ser+10 Pro+10 Glu+10 Pro+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 820+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 825+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 830 ?

!+0

!Cys+10 Leu+10 Phe+10 Asp+10 Thr+10 Ser+10 Leu+10 Ile+10 Ala+10 Arg+10 Gl

#u+10 Lys+10 Asp+10 Ile+10 Ala+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 835+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 840+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 845 ?

!+0

!Glu+10 Leu+10 Tyr+10 Phe+10 Thr+10 Ser+10 Asp+10 Pro+10 Gln+10 Thr+10 Al

#a+10 Tyr+10 Cys+10 Thr+10 Ile+10 Thr ?

!+10 +10 +10 +10 850+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 855+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 860 ?

!+0

!Leu+10 Pro+10 Ser+10 Gly+10 Val+10 Val+10 Pro+10 Arg+10 Phe+10 Glu+10 Tr

#p+10 Ser+10 Leu+10 Asn+10 Asn+10 Val ?

!865+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 8

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 8

#75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 8

#80 ?

!+0

!Ser+10 Leu+10 Pro+10 Glu+10 Tyr+10 Leu+10 Thr+10 Ala+10 Thr+10 Thr+10 Va

#l+10 Val+10 Ser+10 His+10 Thr+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 885+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 890+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 895 ?

!+0

!Gly+10 Gln+10 Ser+10 Thr+10 Val+10 Trp+10 Lys+10 Ser+10 Ser+10 Ala+10 Ar

#g+10 Ala+10 Gly+10 Glu+10 Ala+10 Trp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 900+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 905+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 910 ?

!+0



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315

PM

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:67: ?

!+0

!Met+10 His+10 Arg+10 Pro+10 His+10 Leu+10 Arg+10 Arg+10 His+10 Ser+10 Ar

#g+10 Tyr+10 Tyr+10 Ala+10 Lys+10 Gly ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Glu+10 Val+10 Leu+10 Asn+10 Lys+10 His+10 Met+10 Asp+10 Cys+10 Gly+10 Gl

#y+10 Lys+10 Arg+10 Cys+10 Cys+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Gly+10 Ala+10 Ala+10 Val+10 Phe+10 Thr+10 Leu+10 Phe+10 Trp+10 Thr+10 Cy

#s+10 Val+10 Arg+10 Ile+10 Met+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Glu+10 His+10 Ile+10 Cys+10 Phe+10 Val+10 Arg+10 Asn+10 Ala+10 Met+10 As

#p+10 Arg+10 His+10 Leu+10 Phe+10 Leu ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Arg+10 Asn+10 Ala+10 Phe+10 Trp+10 Thr+10 Ile+10 Val+10 Leu+10 Leu+10 Se

#r+10 Ser+10 Phe+10 Ala+10 Ser+10 Gln ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Ser+10 Thr+10 Ala+10 Ala+10 Val+10 Thr+10 Tyr+10 Asp+10 Tyr+10 Ile+10 Le

#u+10 Gly+10 Arg+10 Arg+10 Ala+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

316

PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Asp+10 Ala+10 Leu+10 Thr+10 Ile+10 Pro+10 Ala+10 Val+10 Gly+10 Pro+10 Ty

#r+10 Asn+10 Arg+10 Tyr+10 Leu+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Arg+10 Val+10 Ser+10 Arg+10 Gly+10 Cys+10 Asp+10 Val+10 Val+10 Glu+10 Le

#u+10 Asn+10 Pro+10 Ile+10 Ser+10 Asn ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Val+10 Asp+10 Asp+10 Met+10 Ile+10 Ser+10 Ala+10 Ala+10 Lys+10 Glu+10 Ly

#s+10 Glu+10 Lys+10 Gly+10 Gly+10 Pro ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Phe+10 Glu+10 Ala+10 Ser+10 Val+10 Val+10 Trp+10 Phe+10 Tyr+10 Val+10 Il

#e+10 Lys+10 Gly+10 Asp+10 Asp+10 Gly ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Glu+10 Asp+10 Lys+10 Tyr+10 Cys+10 Pro+10 Ile+10 Tyr+10 Arg+10 Lys+10 Gl

#u+10 Tyr+10 Arg+10 Glu+10 Cys+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Asp+10 Val+10 Gln+10 Leu+10 Leu+10 Ser+10 Glu+10 Cys+10 Ala+10 Val+10 Gl

#n+10 Ser+10 Ala+10 Gln+10 Met+10 Trp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10



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317

PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Ala+10 Val+10 Asp+10 Tyr+10 Val+10 Pro+10 Ser+10 Thr+10 Leu+10 Val+10 Se

#r+10 Arg+10 Asn+10 Gly+10 Ala+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Leu+10 Thr+10 Ile+10 Phe+10 Ser+10 Pro+10 Thr+10 Ala+10 Ala+10 Leu+10 Se

#r+10 Gly+10 Gln+10 Tyr+10 Leu+10 Leu ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Thr+10 Leu+10 Lys+10 Ile+10 Gly+10 Arg+10 Phe+10 Ala+10 Gln+10 Thr+10 Al

#a+10 Leu+10 Val+10 Thr+10 Leu+10 Glu ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Val+10 Asn+10 Asp+10 Arg+10 Cys+10 Leu+10 Lys+10 Ile+10 Gly+10 Ser+10 Gl

#n+10 Leu+10 Asn+10 Phe+10 Leu+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Ser+10 Lys+10 Cys+10 Trp+10 Thr+10 Thr+10 Glu+10 Gln+10 Tyr+10 Gln+10 Th

#r+10 Gly+10 Phe+10 Gln+10 Gly+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!His+10 Leu+10 Tyr+10 Pro+10 Ile+10 Ala+10 Asp+10 Thr+10 Asn+10 Thr+10 Ar

#g+10 His+10 Ala+10 Asp+10 Asp+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34  
318 PM

!+0

!Tyr+10 Arg+10 Gly+10 Tyr+10 Glu+10 Asp+10 Ile+10 Leu+10 Gln+10 Arg+10 Tr

#p+10 Asn+10 Asn+10 Leu+10 Leu+10 Arg ?

!+10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 300 ?

!+0

!Lys+10 Lys+10 Asn+10 Pro+10 Ser+10 Ala+10 Pro+10 Asp+10 Pro+10 Arg+10 Pr

#o+10 Asp+10 Ser+10 Val+10 Pro+10 Gln ?

!305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#20 ?

!+0

!Glu+10 Ile+10 Pro+10 Ala+10 Val+10 Thr+10 Lys+10 Lys+10 Ala+10 Glu+10 Gl

#y+10 Arg+10 Thr+10 Pro+10 Asp+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335 ?

!+0

!Glu+10 Ser+10 Ser+10 Glu+10 Lys+10 Lys+10 Ala+10 Pro+10 Pro+10 Glu+10 As

#p+10 Ser+10 Glu+10 Asp+10 Asp+10 Met ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?

!+0

!Gln+10 Ala+10 Glu+10 Ala+10 Ser+10 Gly+10 Glu+10 Asn+10 Pro+10 Ala+10 Al

#a+10 Leu+10 Pro+10 Glu+10 Asp+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 365 ?

!+0

!Glu+10 Val+10 Pro+10 Glu+10 Asp+10 Thr+10 Glu+10 His+10 Asp+10 Asp+10 Pr

#o+10 Asn+10 Ser+10 Asp+10 Pro+10 Asp ?

!+10 +10 +10 +10 370+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 380 ?

!+0

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

319

PM

!Tyr+10 Tyr+10 Asn+10 Asp+10 Met+10 Pro+10 Ala+10 Val+10 Ile+10 Pro+10 Va

#1+10 Glu+10 Glu+10 Thr+10 Thr+10 Lys ?

!385+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#00 ?

!+0

!Ser+10 Ser+10 Asn+10 Ala+10 Val+10 Ser+10 Met+10 Pro+10 Ile+10 Phe+10 Al

#a+10 Ala+10 Phe+10 Val+10 Ala+10 Cys ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 405+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415 ?

!+0

!Ala+10 Val+10 Ala+10 Leu+10 Val+10 Gly+10 Leu+10 Leu+10 Val+10 Trp+10 Se

#r+10 Ile+10 Val+10 Lys+10 Cys+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430 ?

!+0

!Arg+10 Ser ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:68: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH+10 362+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION+10 SEQ+10 ID+10 NO:68: ?

!+0

!Met+10 Ala+10 Ser+10 Leu+10 Leu+10 Gly+10 Thr+10 Leu+10 Ala+10 Leu+10 Le

#u+10 Ala+10 Ala+10 Thr+10 Leu+10 Ala ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

320

PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Pro+10 Phe+10 Gly+10 Ala+10 Met+10 Gly+10 Ile+10 Val+10 Ile+10 Thr+10 Gl

#y+10 Asn+10 His+10 Val+10 Ser+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Arg+10 Ile+10 Asp+10 Asp+10 Asp+10 His+10 Ile+10 Val+10 Ile+10 Val+10 Al

#a+10 Pro+10 Arg+10 Pro+10 Glu+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Thr+10 Ile+10 Gln+10 Leu+10 Gln+10 Leu+10 Phe+10 Phe+10 Met+10 Pro+10 Gl

#y+10 Gln+10 Arg+10 Pro+10 His+10 Lys ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Pro+10 Tyr+10 Ser+10 Gly+10 Thr+10 Val+10 Arg+10 Val+10 Ala+10 Phe+10 Ar

#g+10 Ser+10 Asp+10 Ile+10 Thr+10 Asn ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Gln+10 Cys+10 Tyr+10 Gln+10 Glu+10 Leu+10 Ser+10 Glu+10 Glu+10 Arg+10 Ph

#e+10 Glu+10 Asn+10 Cys+10 Thr+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Arg+10 Ser+10 Ser+10 Ser+10 Val+10 Phe+10 Val+10 Gly+10 Cys+10 Lys+10 Va

#l+10 Thr+10 Glu+10 Tyr+10 Thr+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

321

PM

!+0

!Ser+10 Ala+10 Ser+10 Asn+10 Arg+10 Leu+10 Thr+10 Gly+10 Pro+10 Pro+10 Hi

#s+10 Pro+10 Phe+10 Lys+10 Leu+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Ile+10 Arg+10 Asn+10 Pro+10 Arg+10 Pro+10 Asn+10 Asp+10 Ser+10 Gly+10 Me

#t+10 Phe+10 Tyr+10 Val+10 Ile+10 Val ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Arg+10 Leu+10 Asp+10 Asp+10 Thr+10 Lys+10 Glu+10 Pro+10 Ile+10 Asp+10 Va

#l+10 Phe+10 Ala+10 Ile+10 Gln+10 Leu ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Ser+10 Val+10 Tyr+10 Gln+10 Phe+10 Ala+10 Asn+10 Thr+10 Ala+10 Ala+10 Th

#r+10 Arg+10 Gly+10 Leu+10 Tyr+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Lys+10 Ala+10 Ser+10 Cys+10 Arg+10 Thr+10 Phe+10 Gly+10 Leu+10 Pro+10 Th

#r+10 Val+10 Gln+10 Leu+10 Glu+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Tyr+10 Leu+10 Arg+10 Thr+10 Glu+10 Glu+10 Ser+10 Trp+10 Arg+10 Asn+10 Tr

#p+10 Gln+10 Ala+10 Tyr+10 Val+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

322

PM

!Thr+10 Glu+10 Ala+10 Thr+10 Thr+10 Thr+10 Ser+10 Ala+10 Glu+10 Ala+10 Th

#r+10 Thr+10 Pro+10 Thr+10 Pro+10 Val ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Thr+10 Ala+10 Thr+10 Ser+10 Ala+10 Ser+10 Glu+10 Leu+10 Glu+10 Ala+10 Gl

#u+10 His+10 Phe+10 Thr+10 Phe+10 Pro ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Trp+10 Leu+10 Glu+10 Asn+10 Gly+10 Val+10 Asp+10 His+10 Tyr+10 Glu+10 Pr

#o+10 Thr+10 Pro+10 Ala+10 Asn+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Asn+10 Ser+10 Asn+10 Val+10 Thr+10 Val+10 Arg+10 Leu+10 Gly+10 Thr+10 Me

#t+10 Ser+10 Pro+10 Thr+10 Leu+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Gly+10 Val+10 Thr+10 Val+10 Ala+10 Ala+10 Val+10 Val+10 Ser+10 Ala+10 Th

#r+10 Ile+10 Gly+10 Leu+10 Val+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Val+10 Ile+10 Ser+10 Ile+10 Val+10 Thr+10 Arg+10 Asn+10 Met+10 Cys+10 Th

#r+10 Pro+10 His+10 Arg+10 Lys+10 Leu ?

!+10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 300 ?

!+0

!Asp+10 Thr+10 Val+10 Ser+10 Gln+10 Asp+10 Asp+10 Glu+10 Glu+10 Arg+10 Se

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

323

PM

#r+10 Gln+10 Thr+10 Arg+10 Arg+10 Glu ?

!305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#20 ?

!+0

!Ser+10 Arg+10 Lys+10 Phe+10 Gly+10 Pro+10 Met+10 Val+10 Ala+10 Cys+10 Gl

#u+10 Ile+10 Asn+10 Lys+10 Gly+10 Ala ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335 ?

!+0

!Asp+10 Gln+10 Asp+10 Ser+10 Glu+10 Leu+10 Val+10 Glu+10 Leu+10 Val+10 Al

#a+10 Ile+10 Val+10 Asn+10 Pro+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?

!+0

!Ala+10 Leu+10 Ser+10 Ser+10 Pro+10 Asp+10 Ser+10 Ile+10 Lys+10 Met ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 360 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:69: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 499+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:69: ?

!+0

!Met+10 Asn+10 Met+10 Leu+10 Val+10 Ile+10 Val+10 Leu+10 Ala+10 Ser+10 Cy

#s+10 Leu+10 Ala+10 Arg+10 Leu+10 Thr ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

324

PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Phe+10 Ala+10 Thr+10 Arg+10 His+10 Val+10 Leu+10 Phe+10 Leu+10 Glu+10 Gl

#y+10 Thr+10 Gln+10 Ala+10 Val+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Gly+10 Glu+10 Asp+10 Asp+10 Pro+10 Arg+10 Asn+10 Val+10 Pro+10 Glu+10 Gl

#y+10 Thr+10 Val+10 Ile+10 Lys+10 Trp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Thr+10 Lys+10 Val+10 Leu+10 Arg+10 Asn+10 Ala+10 Cys+10 Lys+10 Met+10 Ly

#s+10 Ala+10 Ala+10 Asp+10 Val+10 Cys ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Ser+10 Ser+10 Pro+10 Asn+10 Tyr+10 Cys+10 Phe+10 His+10 Asp+10 Leu+10 Il

#e+10 Tyr+10 Asp+10 Gly+10 Gly+10 Lys ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Lys+10 Asp+10 Cys+10 Pro+10 Pro+10 Ala+10 Gly+10 Pro+10 Leu+10 Ser+10 Al

#a+10 Asn+10 Leu+10 Val+10 Ile+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Leu+10 Lys+10 Arg+10 Gly+10 Glu+10 Ser+10 Phe+10 Val+10 Val+10 Leu+10 Gl

#y+10 Ser+10 Gly+10 Leu+10 His+10 Asn ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10



DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

325

PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Ser+10 Asn+10 Ile+10 Thr+10 Asn+10 Ile+10 Met+10 Trp+10 Thr+10 Glu+10 Ty

#r+10 Gly+10 Gly+10 Leu+10 Leu+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Asp+10 Pro+10 Val+10 Thr+10 Arg+10 Ser+10 Asp+10 Glu+10 Gly+10 Ile+10 Ty

#r+10 Phe+10 Arg+10 Arg+10 Ile+10 Ser ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Gln+10 Pro+10 Asp+10 Leu+10 Ala+10 Met+10 Glu+10 Thr+10 Thr+10 Ser+10 Ty

#r+10 Asn+10 Val+10 Ser+10 Val+10 Leu ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Ser+10 His+10 Val+10 Asp+10 Glu+10 Lys+10 Ala+10 Pro+10 Ala+10 Pro+10 Hi

#s+10 Glu+10 Val+10 Glu+10 Ile+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Thr+10 Ile+10 Lys+10 Pro+10 Ser+10 Glu+10 Ala+10 His+10 Ala+10 His+10 Va

#l+10 Glu+10 Leu+10 Gln+10 Met+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Pro+10 Phe+10 His+10 Glu+10 Leu+10 Asn+10 Asp+10 Asn+10 Ser+10 Pro+10 Th

#r+10 Tyr+10 Val+10 Thr+10 Pro+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

326

PM

!+0

!Leu+10 Arg+10 Val+10 Phe+10 Pro+10 Pro+10 Thr+10 Glu+10 His+10 Val+10 Ly

#s+10 Phe+10 Asn+10 Val+10 Thr+10 Tyr ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Ser+10 Trp+10 Tyr+10 Gly+10 Phe+10 Asp+10 Val+10 Lys+10 Glu+10 Glu+10 Cy

#s+10 Glu+10 Glu+10 Val+10 Lys+10 Leu ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Phe+10 Glu+10 Pro+10 Cys+10 Val+10 Tyr+10 His+10 Pro+10 Thr+10 Asp+10 Gl

#y+10 Lys+10 Cys+10 Gln+10 Phe+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Ala+10 Thr+10 Asn+10 Gln+10 Arg+10 Cys+10 Leu+10 Ile+10 Gly+10 Ser+10 Va

#l+10 Leu+10 Met+10 Ala+10 Glu+10 Phe ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Leu+10 Gly+10 Ala+10 Ala+10 Ser+10 Leu+10 Leu+10 Asp+10 Cys+10 Ser+10 Ar

#g+10 Asp+10 Thr+10 Leu+10 Glu+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Cys+10 His+10 Glu+10 Asn+10 Arg+10 Val+10 Pro+10 Asn+10 Leu+10 Arg+10 Ph

#e+10 Asp+10 Ser+10 Arg+10 Leu+10 Ser ?

!+10 +10 +10 +10 290+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 295+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 300 ?

!+0

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

327

PM

!Glu+10 Ser+10 Arg+10 Ala+10 Gly+10 Leu+10 Val+10 Ile+10 Ser+10 Pro+10 Le

#u+10 Ile+10 Ala+10 Ile+10 Pro+10 Lys ?

!305+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#10+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#15+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#20 ?

!+0

!Val+10 Leu+10 Ile+10 Ile+10 Val+10 Val+10 Ser+10 Asp+10 Gly+10 Asp+10 Il

#e+10 Leu+10 Gly+10 Trp+10 Ser+10 Tyr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 325+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 330+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 335 ?

!+0

!Thr+10 Val+10 Leu+10 Gly+10 Lys+10 Arg+10 Asn+10 Ser+10 Pro+10 Arg+10 Va

#l+10 Val+10 Val+10 Glu+10 Thr+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 340+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 345+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 350 ?

!+0

!Met+10 Pro+10 Ser+10 Lys+10 Val+10 Pro+10 Met+10 Asn+10 Lys+10 Val+10 Va

#l+10 Ile+10 Gly+10 Ser+10 Pro+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 355+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 360+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 365 ?

!+0

!Pro+10 Met+10 Asp+10 Glu+10 Thr+10 Gly+10 Asn+10 Tyr+10 Lys+10 Met+10 Ty

#r+10 Phe+10 Val+10 Val+10 Ala+10 Gly ?

!+10 +10 +10 +10 370+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 375+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 380 ?

!+0

!Val+10 Ala+10 Ala+10 Thr+10 Cys+10 Val+10 Ile+10 Leu+10 Thr+10 Cys+10 Al

#a+10 Leu+10 Leu+10 Val+10 Gly+10 Lys ?

!385+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#90+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 3

#95+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#00 ?

!+0

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328

PM

!Lys+10 Lys+10 Cys+10 Pro+10 Ala+10 His+10 Gln+10 Met+10 Gly+10 Thr+10 Ph

#e+10 Ser+10 Lys+10 Thr+10 Glu+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 405+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 410+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 415 ?

!+0

!Leu+10 Tyr+10 Ala+10 Pro+10 Leu+10 Pro+10 Lys+10 Asn+10 Glu+10 Phe+10 Gl

#u+10 Ala+10 Gly+10 Gly+10 Leu+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 420+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 425+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 430 ?

!+0

!Asp+10 Asp+10 Glu+10 Glu+10 Val+10 Ile+10 Tyr+10 Asp+10 Glu+10 Val+10 Ty

#r+10 Glu+10 Pro+10 Leu+10 Phe+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 435+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 440+10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 445 ?

!+0

!Gly+10 Tyr+10 Cys+10 Lys+10 Gln+10 Glu+10 Phe+10 Arg+10 Glu+10 Asp+10 Va

#l+10 Asn+10 Thr+10 Phe+10 Phe+10 Gly ?

!+10 +10 +10 +10 450+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 455+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 460 ?

!+0

!Ala+10 Val+10 Val+10 Glu+10 Gly+10 Glu+10 Arg+10 Ala+10 Leu+10 Asn+10 Ph

#e+10 Lys+10 Ser+10 Ala+10 Ile+10 Ala ?

!465+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 4

#80 ?

!+0

!Ser+10 Met+10 Ala+10 Asp+10 Arg+10 Ile+10 Leu+10 Ala+10 Asn+10 Lys+10 Se

#r+10 Gly+10 Arg+10 Arg+10 Asn+10 Met ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 485+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 490+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 495 ?

!+0

!Asp+10 Ser+10 Tyr ?

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34  
329 PM

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:70: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 260+10 amino+10  
#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:70: ?

!+0

!Met+10 Pro+10 Phe+10 Lys+10 Thr+10 Arg+10 Gly+10 Ala+10 Glu+10 Asp+10 Al

#a+10 Ala+10 Ala+10 Gly+10 Lys+10 Asn ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Arg+10 Phe+10 Lys+10 Lys+10 Ser+10 Arg+10 Asn+10 Arg+10 Glu+10 Ile+10 Le

#u+10 Pro+10 Thr+10 Arg+10 Leu+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Gly+10 Thr+10 Gly+10 Lys+10 Lys+10 Thr+10 Ala+10 Gly+10 Leu+10 Ser+10 As

#n+10 Tyr+10 Thr+10 Gln+10 Pro+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Pro+10 Trp+10 Asn+10 Pro+10 Lys+10 Phe+10 Cys+10 Ser+10 Ala+10 Arg+10 Gl

#y+10 Glu+10 Ser+10 Asp+10 Asn+10 His ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

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330

PM

!Ala+10 Cys+10 Lys+10 Asp+10 Thr+10 Phe+10 Tyr+10 Arg+10 Arg+10 Thr+10 Cy

#s+10 Cys+10 Ala+10 Ser+10 Arg+10 Ser ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Thr+10 Val+10 Ser+10 Ser+10 Gln+10 Pro+10 Asp+10 Ser+10 Pro+10 His+10 Th

#r+10 Pro+10 Met+10 Pro+10 Thr+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Tyr+10 Gly+10 Arg+10 Val+10 Pro+10 Ser+10 Ala+10 Lys+10 Arg+10 Lys+10 Ly

#s+10 Leu+10 Ser+10 Ser+10 Ser+10 Asp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Cys+10 Glu+10 Gly+10 Ala+10 His+10 Gln+10 Pro+10 Leu+10 Val+10 Ser+10 Cy

#s+10 Lys+10 Leu+10 Pro+10 Asp+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

!+0

!Gln+10 Ala+10 Ala+10 Pro+10 Ala+10 Arg+10 Thr+10 Tyr+10 Ser+10 Ser+10 Al

#a+10 Gln+10 Arg+10 Tyr+10 Thr+10 Val ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Asp+10 Glu+10 Val+10 Ser+10 Ser+10 Pro+10 Thr+10 Pro+10 Pro+10 Gly+10 Va

#l+10 Asp+10 Ala+10 Val+10 Ala+10 Asp ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

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331

PM

!Leu+10 Glu+10 Thr+10 Arg+10 Ala+10 Glu+10 Leu+10 Pro+10 Gly+10 Ala+10 Th

#r+10 Thr+10 Glu+10 Gln+10 Thr+10 Glu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Ser+10 Lys+10 Asn+10 Lys+10 Leu+10 Pro+10 Asn+10 Gln+10 Gln+10 Ser+10 Ar

#g+10 Leu+10 Lys+10 Pro+10 Lys+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Thr+10 Asn+10 Glu+10 His+10 Val+10 Gly+10 Gly+10 Glu+10 Arg+10 Cys+10 Pr

#o+10 Ser+10 Glu+10 Gly+10 Thr+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Glu+10 Ala+10 Pro+10 Ser+10 Leu+10 Gly+10 Ile+10 Leu+10 Ser+10 Arg+10 Va

#l+10 Gly+10 Ala+10 Ala+10 Ile+10 Ala ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Asn+10 Glu+10 Leu+10 Ala+10 Arg+10 Met+10 Arg+10 Arg+10 Ala+10 Cys+10 Le

#u+10 Pro+10 Leu+10 Ala+10 Ala+10 Ser ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Ala+10 Ala+10 Ala+10 Ala+10 Gly+10 Ile+10 Val+10 Ala+10 Trp+10 Ala+10 Al

#a+10 Ala+10 Arg+10 Ala+10 Leu+10 Gln ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Lys+10 Gln+10 Gly+10 Arg ?

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332

PM

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:71: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 294+10 amino+10  
#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:71: ?

!+0

!Met+10 Ser+10 Lys+10 Cys+10 Tyr+10 Cys+10 Leu+10 Ala+10 Arg+10 His+10 Le

#u+10 Tyr+10 Lys+10 Ser+10 Pro+10 Arg ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Cys+10 Val+10 Gly+10 Arg+10 Arg+10 Val+10 Ala+10 Phe+10 Gly+10 Gly+10 Le

#u+10 Ala+10 Thr+10 Met+10 Ser+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Pro+10 Pro+10 Thr+10 Ser+10 His+10 Leu+10 Asp+10 Leu+10 Ala+10 Phe+10 Se

#r+10 Ala+10 Ala+10 Phe+10 Arg+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Thr+10 Asp+10 Leu+10 Pro+10 Gly+10 Gly+10 Arg+10 Phe+10 Trp+10 Arg+10 Al

#a+10 Ser+10 Gln+10 Ser+10 Cys+10 Asp ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?





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334

PM

!+0

!Gly+10 Pro+10 Asp+10 Ile+10 Leu+10 Ser+10 Phe+10 Phe+10 Ser+10 Ala+10 Al

#a+10 Val+10 Glu+10 Leu+10 Pro+10 Val ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Leu+10 Tyr+10 Ile+10 Arg+10 Ala+10 Arg+10 Gly+10 Gly+10 Ala+10 His+10 Se

#r+10 Arg+10 Ser+10 Ala+10 His+10 Trp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Asn+10 Asn+10 Gln+10 Ser+10 Ser+10 Ala+10 Pro+10 Ala+10 Ala+10 Gly+10 Le

#u+10 Ala+10 Ala+10 Ile+10 Arg+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 205 ?

!+0

!Gly+10 Met+10 Glu+10 Met+10 Val+10 Arg+10 Ser+10 Leu+10 Leu+10 Val+10 Il

#e+10 Ala+10 Leu+10 Pro+10 Leu+10 Ser ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

!Asn+10 Phe+10 Thr+10 Leu+10 Pro+10 Glu+10 Asp+10 Leu+10 Pro+10 Glu+10 Gl

#y+10 Ser+10 Gln+10 Asn+10 Ser+10 Ile ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Arg+10 Ala+10 Phe+10 Val+10 Ala+10 His+10 Leu+10 Met+10 Asn+10 Cys+10 Va

#l+10 Ala+10 Thr+10 Asp+10 Lys+10 Ile ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

335

PM

!Met+10 Ser+10 Pro+10 Asp+10 Val+10 Arg+10 Val+10 Pro+10 Val+10 Glu+10 Gl

#u+10 Ser+10 Phe+10 Tyr+10 Ser+10 His ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Cys+10 Leu+10 Arg+10 Glu+10 Ile+10 Ile+10 Met+10 Cys+10 Glu+10 Arg+10 Al

#a+10 Phe+10 Cys+10 Tyr+10 Pro+10 Cys ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 280+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 285 ?

!+0

!Asn+10 Pro+10 Pro+10 Pro+10 Lys+10 Trp ?

!+10 +10 +10 +10 290 ?

!+0

!+0

!(2)+10 INFORMATION+10 FOR+10 SEQ+10 ID+10 NO:72: ?

!+0

!+10 +10 +10 +10 +10 (i)+10 SEQUENCE+10 CHARACTERISTICS: ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (A)+10 LENGTH:+10 278+10 amino+10

#acids ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (B)+10 TYPE:+10 amino+10 acid ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 (D)+10 TOPOLOGY:+10 linear ?

!+0

!+10 +10 +10 +10 (ii)+10 MOLECULE+10 TYPE:+10 protein ?

!+0

!+10 +10 +10 +10 (xi)+10 SEQUENCE+10 DESCRIPTION:+10 SEQ+10 ID+10 NO:72: ?

!+0

!Met+10 Glu+10 Asn+10 Met+10 Leu+10 Asp+10 Gly+10 Cys+10 Tyr+10 Pro+10 Le

#u+10 Ala+10 Leu+10 Met+10 Asp+10 Ser ?

!+10 +10 1+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 5+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 10+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 15 ?

!+0

!Asp+10 His+10 Ile+10 Thr+10 Ala+10 His+10 Ala+10 Val+10 Pro+10 Arg+10 Gl

#y+10 Glu+10 Arg+10 Arg+10 Arg+10 Gln ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 20+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 25+10 +10 +10 +10 +10

DA: data50 — MD: 9/29/2003 — N: 5,840,220 — F: 02 — 10/21/2003 - 2:39:34

336

PM

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 30 ?

!+0

!Gly+10 Ala+10 Ala+10 Val+10 Ala+10 Ser+10 Ser+10 Glu+10 Ser+10 Ala+10 As

#p+10 Ser+10 Val+10 Asp+10 Pro+10 Cys ?

!+10 +10 +10 +10 +10 +10 +10 +10 35+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 40+10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 45 ?

!+0

!Ile+10 Arg+10 Ile+10 Ala+10 Ser+10 Arg+10 Leu+10 Trp+10 Arg+10 Glu+10 Le

#u+10 Val+10 Glu+10 Ile+10 Ser+10 Ser ?

!+10 +10 +10 +10 +10 50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 60 ?

!+0

!Glu+10 Leu+10 Lys+10 Asp+10 Gly+10 Tyr+10 Gly+10 Glu+10 Phe+10 Thr+10 Se

#r+10 Ala+10 Arg+10 Asp+10 Arg+10 Arg ?

!+10 65+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 70+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 75+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 80 ?

!+0

!Asn+10 Ala+10 Leu+10 Ile+10 Ala+10 Ala+10 Asn+10 Glu+10 Arg+10 Leu+10 Ar

#g+10 Ser+10 Ala+10 Phe+10 Leu+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 85+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 90+10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 95 ?

!+0

!Ala+10 Ser+10 Arg+10 Ala+10 Thr+10 Arg+10 Gly+10 Leu+10 Gly+10 Leu+10 Ar

#g+10 Pro+10 Arg+10 Trp+10 Ala+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 100+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 105+10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 110 ?

!+0

!Thr+10 Glu+10 Ser+10 Val+10 Ala+10 Asn+10 Ser+10 Pro+10 Thr+10 Asp+10 Pr

#o+10 Asn+10 Asn+10 Gly+10 Asn+10 Gly ?

!+10 +10 +10 +10 +10 +10 +10 +10 115+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 120+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 125 ?

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!+0

!Leu+10 Gly+10 Glu+10 Leu+10 Glu+10 Glu+10 Ala+10 Met+10 Glu+10 Gly+10 Il

#e+10 Glu+10 Gly+10 Asp+10 Phe+10 Trp ?

!+10 +10 +10 +10 130+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 135+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 140 ?

!+0

!Leu+10 Asp+10 Ser+10 Leu+10 Asp+10 Gly+10 Asp+10 Arg+10 Phe+10 Glu+10 As

#p+10 Glu+10 Ser+10 Arg+10 Thr+10 Met ?

!145+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#50+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#55+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 1

#60 ?

!+0

!Gln+10 Ser+10 Glu+10 Asn+10 Met+10 Arg+10 Phe+10 Val+10 Ile+10 Glu+10 Ly

#s+10 Glu+10 Leu+10 Leu+10 Ser+10 Trp ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 165+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 170+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 175 ?

!+0

!Leu+10 Ser+10 Arg+10 His+10 Leu+10 Pro+10 Ala+10 Asp+10 Leu+10 Ala+10 Se

#r+10 Ala+10 Glu+10 Arg+10 Glu+10 Thr ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 180+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 185+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 190 ?

!+0

!Ser+10 Arg+10 Ser+10 Leu+10 Leu+10 Ala+10 Ala+10 Gly+10 His+10 Trp+10 Cy

#s+10 Cys+10 Leu+10 Trp+10 His+10 Pro ?

!+10 +10 +10 +10 +10 +10 +10 +10 195+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 200+10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 205 ?

!+0

!Arg+10 Pro+10 Cys+10 Arg+10 Glu+10 Ala+10 Cys+10 Leu+10 Tyr+10 Asp+10 Se

#r+10 Ile+10 Tyr+10 Val+10 Gln+10 Ser ?

!+10 +10 +10 +10 210+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 215+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10

#+10 +10 +10 220 ?

!+0

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!Leu+10 Phe+10 Cys+10 Val+10 Gly+10 Thr+10 Gly+10 Arg+10 Val+10 Pro+10 Gl

#n+10 Ser+10 Glu+10 Met+10 Arg+10 Arg ?

!225+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#30+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#35+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 2

#40 ?

!+0

!Arg+10 Glu+10 Tyr+10 Leu+10 Ala+10 Ala+10 Leu+10 Arg+10 Ala+10 Gly+10 Al

#a+10 Ala+10 Ala+10 Ala+10 Asn+10 Ser ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 245+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 250+10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 255 ?

!+0

!Pro+10 Glu+10 Val+10 Ser+10 Ala+10 Ser+10 Ile+10 Phe+10 Ala+10 Arg+10 As

#p+10 Ala+10 Gly+10 Ile+10 Ala+10 Leu ?

!+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 260+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 265+10 +10 +10 +10 +10

#+10 +10 +10 +10 +10 +10 +10 +10 +10 +10 +10 270 ?

!+0

!Ala+10 Leu+10 Ala+10 Arg+10 Arg+10 Arg ?

!+10 +10 +10 +10 +10 +10 +10 +10 275+TZ,1/64 ?

!+PS

Item character count = 229528

Folder character count = 229528

## CWU Table Item #: 0560 ( 1 column )

TABLE II

EFFICACY OF RECOMBINANT LIVE ILT VIRUS S-ILT-009  
AGAINST VIRULENT INFECTIOUS LARYNGOTRACHEITIS VIRUS  
CHALLENGE

Vaccine	Gene(s) Deleted	Dose	Route	Challenge <sup>a</sup>	Protection <sup>b</sup>
S-ILT-009	gG-, US2-	$7.8 \times 10^3$	IO <sup>c</sup>	OS <sup>d</sup>	70%
S-ILT-009	gG-, US2-	$1.56 \times 10^3$	IO	OS	77%
Controls				OS	0%
ASL embryo			IO	OS	90%

14 day old chicks

<sup>a</sup>USDA Challenge virus =  $1.0 \times 10^{4.5}$  pfu<sup>b</sup>Protection = # healthy birds/total (%).<sup>c</sup>Intraocular<sup>d</sup>Orbital Sinus

+T1 TABLE II+HZ,1/32

!+HC,1 EFFICACY OF RECOMBINANT LIVE ILT VIRUS S-ILT-009?

!AGAINST VIRULENT INFECTIOUS LARYNGOTRACHEITIS VIRUS?

!+UZ,1/32 CHALLENGE?

!+HL,1 ? +HL,7 Gene(s)? +HL,12 ? +HL,17 ? +HL,20 ? +HL,25 ?

!Vaccine? Deleted? Dose? Route? Challenge+HU a? Protection+HU b+HZ,1/32 ?

!+TL,1 S-ILT-009? +TL,7 gG-, US2-? +TL,12 +11 7.8 +33 +0 10+HU 3? +TL,17 IO+HU c? +TL,20

OS+HU d? +TL,25 70%?

!S-ILT-009? gG-, US2-? 1.56 +33 +0 10+HU 3? IO? OS? 77%?

!Controls? ? ? ? OS? +11 0%?

!ASL? ? ? IO? OS? 90%?

!embryo+TZ,1/32 ?

!+L6 14 day old chicks

!+L6 +HU a+L USDA Challenge virus +32 +0 1.0 +33 +0 10+HU 4.5+L +0 pfu

!+L6 +HU b+L Protection +32 +0 +190 +0 healthy birds/total (%).

!+L6 +HU c+L Intraocular

!+L6 +HU d+L Orbital Sinus

!+PS

Item character count = 486

TABLE III

EFFICACY OF RECOMBINANT LIVE ILT VIRUS S-ILT-014  
AGAINST VIRULENT INFECTIOUS LARYNGOTRACHEITIS VIRUS  
CHALLENGE

Vaccine	Gene(s) Deleted	Dose	Route	Challenge <sup>a</sup>	Protection <sup>b</sup>
S-ILT-014	gG-	$1.08 \times 10^4$	IO <sup>c</sup>	OS <sup>d</sup>	97%
S-ILT-014	gG-	$2.16 \times 10^3$	IO	OS	97%
Controls				OS	0%
ASL embryo			IO	OS	90%

14 day old chicks

<sup>a</sup>USDA Challenge virus =  $1.0 \times 10^{4.5}$  pfu

<sup>b</sup>Protection = # healthy birds/total (%).

<sup>c</sup>Intraocular

<sup>d</sup>Orbital Sinus

+T1 TABLE III+HZ,1/32

!+HC,1 EFFICACY OF RECOMBINANT LIVE ILT VIRUS S-ILT-014?

!AGAINST VIRULENT INFECTIOUS LARYNGOTRACHEITIS VIRUS?

!+UZ,1/32 CHALLENGE?

!+HL,1 ? +HL,8 Gene(s)? +HL,12 ? +HL,17 ? +HL,20 ? +HL,25 ?

!Vaccine? Deleted? Dose? Route? Challenge+HU a? Protection+HU b+HZ,1/32 ?

!+TL,1 S-ILT-014? +TL,8 gG-? +TL,12 1.08 +33 +0 10+HU 4? +TL,17 IO+HU c? +TL,20 OS+HU  
d? +TL,25 97%?

!S-ILT-014? gG-? 2.16 +33 +0 10+HU 3? IO? OS? 97%?

!Controls? ? ? ? OS? +11 0%?

!ASL embryo? ? ? IO? OS? 90%+TZ,1/32 ?

!+L6 14 day old chicks

!+L6 +HU a+L USDA Challenge virus +32 +0 1.0 +33 +0 10+HU 4.5+L +0 pfu

!+L6 +HU b+L Protection +32 +0 +190 +0 healthy birds/total (%).

!+L6 +HU c+L Intraocular

!+L6 +HU d+L Orbital Sinus

!+PS

Item character count = 475

CWU Table Item #: 0630 ( 1 column )

TABLE IV

EFFICACY OF RECOMBINANT LIVE ILT VIRUS S-ILT-015  
AGAINST VIRULENT INFECTIOUS LARYNGOTRACHEITIS VIRUS  
CHALLENGE

Vaccine	Gene(s) Deleted	Dose	Route	Challenge <sup>a</sup>	Protection <sup>b</sup>
S-ILT-015	gG-, UL47-like	$1.0 \times 10^5$	IO <sup>c</sup>	OS <sup>d</sup>	70%
Controls				OS	0%



TABLE IV-continued

EFFICACY OF RECOMBINANT LIVE ILT VIRUS S-ILT-015  
AGAINST VIRULENT INFECTIOUS LARYNGOTRACHEITIS VIRUS  
CHALLENGE

Vaccine	Gene(s) Deleted	Dose	Route	Challenge <sup>a</sup>	Protection <sup>b</sup>
ASL embryo			IO OS		90%

14 day old chicks

<sup>a</sup>USDA Challenge virus =  $1.0 \times 10^{4.5}$  pfu

<sup>b</sup>Protection = # healthy birds/total (%).

<sup>c</sup>Intraocular

<sup>d</sup>Orbital Sinus

+T1 TABLE IV+HZ, 1/32

!+HC, 1 EFFICACY OF RECOMBINANT LIVE ILT VIRUS S-ILT-015?

!AGAINST VIRULENT INFECTIOUS LARYNGOTRACHEITIS VIRUS?

!+UZ, 1/32 CHALLENGE?

!+HL, 1 ? +HL, 7 Gene(s)? +HL, 12 ? +HL, 17 ? +HL, 20 ? +HL, 25 ?

!Vaccine? Deleted? Dose? Route? Challenge+HU a? Protection+HU b+HZ, 1/32 ?

!+TL, 1 S-ILT-015? +TL, 7 gG-, ? +TL, 12 1.0 +33 +0 10+HU 5? +TL, 17 IO+HU c? +TL, 20 OS+HU  
d? +TL, 25 70%?

!? UL47-like?

!Controls? ? ? ? OS? +11 0%?

!ASL? ? ? IO? OS? 90%?

!embryo+TZ, 1/32 ?

!+L6 14 day old chicks

!+L6 +HU a+L USDA Challenge virus +32 +0 1.0 +33 +0 10+HU 45+L +0 pfu

!+L6 +HU b+L Protection +32 +0 +190 +0 healthy birds/total (%).

!+L6 +HU c+L Intraocular

!+L6 +HU d+L Orbital Sinus

!+PS

Item character count = 448

Folder character count = 1409

## CWU Table Item #: 0480 ( 1 column )

TABLE I

Sequence Homology between Infectious Laryngotracheitis  
Virus (ILTV) Open Reading Frames in the Unique Short Region  
and other Viral Proteins

Open Reading Frame (ORF)	Start (BP)	End (BP)	Length (aa)	Genbank Alligmenta
1 (RC) <sup>b</sup>	970	281	229	EHV-1 US2
2	1059	2489	476	MDV PK
3	2575	4107	510	HSV-1 UL47
4	4113	4445	110	NSc
4 (RC)	4519	4139	126	NS
5	4609	5487	292	PRV gX
6	5697	8654	985	ILTV g60
6 (RC)	7826	6948	292	HSV-2 UL39
7	8462	9766	434	PRV g50
8	9874	10962	362	VZV gI
8 (RC)	11150	10617	177	NS
9	11159	12658	499	VZV gE
10	12665	13447	260	NS

<sup>a</sup>Sequence alignment scored to the Entrez Release 6.0 of Genbank Virus Database.

<sup>b</sup>RC = Reverse Complement.

<sup>c</sup>NS = No score above 120 was found.

Other Abbreviations: EHV = Equine herpesvirus; MDV = Marek's disease virus; HSV-1 = Herpes Simplex virus 1; PRV = Pseudorabies virus; ILTV = Infectious laryngotracheitis virus; HSV-2 = Herpes Simplex virus 2; VZV = Varicella-Zoster virus; BP = base pairs; aa = amino acids.

+T1 TABLE I+HZ,1/32

!+HC,1 Sequence Homology between Infectious Laryngotracheitis?

!Virus (ILTV) Open Reading Frames in the Unique Short Region?

!+UZ,3/30 and other Viral Proteins?

!+HL,1 Open Reading? +HC,8 ? +HC,14 ? +HC,19 ? +HL,25 Genbank?

!Frame (ORF)? Start (BP)? End (BP)? Length (aa)? Alligmenta+HZ,1/32 ?

!+TL,1 1 (RC)+HU b? +TA,8 970? +TA,14 281? +TC,19 229? +TL,25 EHV-1 US2?

!2? 1059? 2489? 476? MDV PK?

!3? 2575? 4107? 510? HSV-1 UL47?

!4? 4113? 4445? 110? NSc?

!4 (RC)? 4519? 4139? 126? NS?

!5? 4609? 5487? 292? PRV gX?

!6? 5697? 8654? 985? ILTV g60?

!6 (RC)? 7826? 6948? 292? HSV-2 UL39?

!7? 8462? 9766? 434? PRV g50?

!8? 9874? 10962? 362? VZV gI?

!8 (RC)? 11150? 10617? 177? NS?

!9? 11159? 12658? 499? VZV gE?

!10? 12665? 13447? 260? NS+TZ,1/32 ?

!+L6 +HU a+L Sequence alignment scored to the Entrez Release 6.0 of Genbank Virus Database.

!+L6 +HU b+L RC +32 +0 Reverse Complement.

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!+L6 +HU c+L NS +32 +0 No score above 120 was found.

!+L6 Other Abbreviations: EHV +32 +0 Equine herpesvirus; MDV +32 +0 Mareks disease virus; HSV-1 +32 +0 Herpes Simplex virus 1; PRV +32 +0 Pseudorabies virus; ILTV +32 +0 Infectious laryngotracheitis virus; HSV-2 +32 +0 Herpes Simplex virus 2; VZV +32 +0 Varicella-Zoster virus; BP +32 +0 base pairs; aa +32 +0 amino acids.

!+PS

Item character count = 1015

### CWU Table Item #: 0800 ( 1 column )

TABLE V

ORF	HSV Homolog	Best Matches	Blast Score
1	US2	EHV1 EUS1	$3.1 \times 10^{-13}$
		EHV4 EUS1	$5.3 \times 10^{-12}$
		HSV2 US2	$6.7 \times 10^{-7}$
2	PK	MDV PK	$8.2 \times 10^{-36}$
		HVT PK	$5.4 \times 10^{-35}$
		HSV1 PK	$4.1 \times 10^{-30}$
3	UL47	HSV1 UL47	$6.0 \times 10^{-1}$
		EHV1 UL47	$9.9 \times 10^{-1}$
		MDV UL47	$9.9 \times 10^{-1}$
4	gG	PRV gG	$5.3 \times 10^{-5}$
		BHV1 gG	$1.7 \times 10^{-2}$
		EHV1 gG	$6.8 \times 10^{-1}$
5	ORF 5	EHV1 EUS5	$1.9 \times 10^{-45}$
		Human mucin	$1.1 \times 10^{-25}$
6	gD	MDV gD	$6.8 \times 10^{-4}$
		PRV g50	$2.0 \times 10^{-3}$
		HVT gD	$3.5 \times 10^{-3}$
7	gI	VZV gI	$4.2 \times 10^{-2}$
		HVT gI	$7.9 \times 10^{-2}$
		SVV gI	$4.3 \times 10^{-1}$
8	gE	SHV SA8 gE	$1.7 \times 10^{-6}$
		HSV1 gE	$1.1 \times 10^{-3}$
		BHV1 gE	$1.5 \times 10^{-2}$
9	ORF 9	EBV BLRF2	$5.7 \times 10^{-1}$
SR1	no HSV	MDV "ORF3"	$4.8 \times 10^{-4}$
	homologue	HVT "ORF3"	$2.6 \times 10^{-1}$
SR2	US 10	EHV-4 US10	$1.2 \times 10^{-1}$
		HSV-1 US10	$8.7 \times 10^{-1}$
		EHV-1 US10	$8.7 \times 10^{-1}$

+T1 TABLE V+HZ,1/32

!+HL,3 ? +HL,8 HSV? +HL,15 ? +HL,24 ?

!ORF? Homolog? Best Matches? Blast Score+HZ,1/32 ?

!+TL,3 1? +TL,8 US2? +TL,15 EHV1 EUS1? +TL,24 3.1 +33 +0 10+HU +31 13?

! ? ? EHV4 EUS1? 5.3 +33 +0 10+HU +31 12?

! ? ? HSV2 US2? 6.7 +33 +0 10+HU +31 7?

!2? PK? MDV PK? 8.2 +33 +0 10+HU +31 36?

! ? ? HVT PK? 5.4 +33 +0 10+HU +31 35?

! ? ? HSV1 PK? 4.1 +33 +0 10+HU +31 30?

!3? UL47? HSV1 UL47? 6.0 +33 +0 10+HU +31 1?

! ? ? EHV1 UL47? 9.9 +33 +0 10+HU +31 1?

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! ? ? MDV UL47? 9.9 +33 +0 10+HU +31 1?  
!4? gG? PRV gG? 5.3 +33 +0 10+HU +31 5?  
! ? ? BHV1 gG? 1.7 +33 +0 10+HU +31 2?  
! ? ? EHV1 gG? 6.8 +33 +0 10+HU +31 1?  
!5? ORF 5? EHV1 EUS5? 1.9 +33 +0 10+HU +31 45?  
! ? ? Human mucin? 1.1 +33 +0 10+HU +31 25?  
!6? gD? MDV gD? 6.8 +33 +0 10+HU +31 4?  
! ? ? PRV g50? 2.0 +33 +0 10+HU +31 3?  
! ? ? HVT gD? 3.5 +33 +0 10+HU +31 3?  
!7? gI? VZV gI? 4.2 +33 +0 10+HU +31 2?  
! ? ? HVT gI? 7.9 +33 +0 10+HU +31 2?  
! ? ? SVV gI? 4.3 +33 +0 10+HU +31 1?  
!8? gE? SHV SA8 gE? 1.7 +33 +0 10+HU +31 6?  
! ? ? HSV1 gE? 1.1 +33 +0 10+HU +31 3?  
! ? ? BHV1 gE? 1.5 +33 +0 10+HU +31 2?  
!9? ORF 9? EBV BLRF2? 5.7 +33 +0 10+HU +31 1?  
!SR1? no HSV? MDV +37 ORF3+38 ? 4.8 +33 +0 10+HU +31 4?  
! ? ? homologue? HVT +37 ORF3+38 ? 2.6 +33 +0 10+HU +31 1?  
!SR2? US 10? EHV-4 US10? 1.2 +33 +0 10+HU +31 1?  
! ? ? HSV-1 US10? 8.7 +33 +0 10+HU +31 1?  
! ? ? EHV-1 US10? 8.7 +33 +0 10+HU +31 1+TZ,1/32 ?  
!+PS

Item character count = 831

Folder character count = 1846